Original Articles.

A ROENTGENOLOGICAL CONSIDERATION OF THE RELATION OF INDIVIDUAL TYPE TO INTESTINAL STASIS.*

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To venture forth, through the mediumship of a descriptive communication, into the vastity of such a question as that of ileal stasis can hardly be considered, at the present day, to be entering upon ground untrodden, since the would-be investigator is destined to come upon the imprints of innumerable feet, some deep, as might be expected, others shallow. It is the enduring hope, however, of any subsequent explorer that he may, by chance, discover some corner as yet untrodden or that he may investigate some small stream tributary to the greater one described and charted by others. Even if he were not thus so fortunate, may it not be his mission to extol the importance of the smaller tributary as it adds its volume to the onflowing of scientific enlightenment?

Thus to trace more deeply the course of such a contributory stream, upon the broad map of our understanding, it is the writer's hope. It has been given him, perhaps, to outline with freshened pen its devious boundaries, already firmly drawn.

To speak more concretely, one may doubt if the discovery of a great river has created in the world geographic an enthusiasm more profound than that which has been stimulated in the realms of medicine by our growing intimacy with the pathology of the alimentary tract. This is made possible, in great measure, by our equally growing familiarity with the diagnostic possibilities of x-rays. From the days of Cannon's classical observations upon the alimentary function in cats, our progress has been without hesitation or pause. Many have been the contributions to our rapidly-developing conception of things alimentary, and workers in the roentgen field have been the proud bearers of the guiding torches. Among those who have lighted our way most radiantly, some are here today, and by his association with them upon the deliberative records of this society the writer at once becomes doubly honored.

Intestinal stasis! Casual consideration of its mere definition will give but little idea of all it embraces. To recall to one's memory the instances where patients have presented proven intestinal stasis is but to create the mental picture of a small army of individuals who are the victims of nearly every variety of subjective symptoms. This multiplicity of symptoms is far in excess of the relatively small group forming the classical complex of chronic constipation. The developments of our increased knowledge prompt us now to include, as manifestations of intestinal stasis, the periodical hunger pains and epigastric pressure-points of tenderness which we were wont to associate with duodenal ulcer and which we now know may not be ascribed to ulcer—in the strict sense of its floridity. We must also include in the gamut of such manifestations the pain of the familiar gall-stone attack. It were better, perhaps, in the light of present understanding to designate such distress as a "gall-bladder attack" rather than a gall-stone attack, or else to adhere solely to the term "biliary colic." We must include epigastric or abdominal pain due to jejunal constrictions, or inhibitions of like nature. We must not forget the ileal stases with or without their prevalvular kinks. We must not neglect to include the swelling and the tenderness of the perityphilitides. Intestinal static influences must embrace as well the neighborhood symptoms of the chronic appendices, to say nothing of the not impossible periappendicular manifestations after the removal of the appendix.

Distal to the ileocolonic valve, intestinal stasis comes into its own, so to speak, and it manifests itself in the cecum, as has been said, in the ascending colon, and by influencing the relation between these two, as well as along the colonic path, with especial reference to the two flexures, concerning which more will be said; thence onward,—the distal rectum, only, forming the limitation of possibility for its mischief-making proclivities.

So much for the anatomical opportunities offered for the production of stasis, which may be classed as immediate,—its primary foci, so to speak. Is it to be wondered that many and diverse are the symptoms which may arise locally, to say nothing of the element of pain which may be referred from the primary point? The function of this paper is to deal, however, not with the question of referred pain but with that of transferred mischief—engendered and sustained by intestinal aberrations producing stasis. Such mischief, however, though secondary to the causative factor, is made up of pathological entities.

The term "chronic rheumatism" is not merely that form described in the text books under this appellation as the sequel of the subacute mono- or polyarticular type which is described in turn as the sequel of the long-recognized acute rheumatic fever. "Chronic rheumatism," as a term, is here employed in its broadest, most ill-defined and popular sense. The term may embrace, with equal pertinence, the muscular type, the infectious articular type, both single and multiple, the manifestations often classed as rheumatoid arthritis, as osteo-arthritis and as

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chronic gout, under the all-embracing term of "arthritis deformans."

To single out "chronic rheumatism," so called, as occupying an interrelational position with intestinal stasis, is merely to select one of a long series comprising the sequelae of prolonged infectious or chemical absorption or intoxication resulting from such alimentary delay. It was here selected, as being important, in spite of the fact that the subject is far from being a new one, first, because articular mischief is of such common occurrence as to come almost daily under the observation of all; second, because articular change, if tangible and evident, will provoke prompt complaint from the patient, especially from those of the female sex; and third, the length of this paper will permit of a consideration of but one of the great group of functional perversions secondary to aberrations of metabolism.

It is now generally recognized that either the tonsils or the teeth may equally well act as an *atrium* for the entrance of bacterially noxious material, thereby destined for systemic absorption. The gastro-intestinal tract, however, much more often comes under the observation of the roentgenologist and, therefore he, like any especially-trained investigator, is compelled and impelled to employ his own view-point and his deductions therefrom. The writer, consequently, realizes the limitation of his field of vision as he gazes at the situation through his own relatively small aperture, but reiterates his desire to deal with a clinical question as broadly as he may, although surrounded by clinicians who have balanced this matter, as between diagnostic cause and therapeutic effect, with the utmost nicety.

So much for explanatory preamble.

The possibility of secondary joint infections as well as deposits of a chemical nature following chronic intoxication or autointoxication from tonsils, teeth or alimentary tract is now well recognized in every medical community. This general recognition has been stimulated by the literary contributions of various authors working from the view-point of the dentist, the rhinologist or the orthopedist. Infections from the alimentary tract, involving the joints as depositories, deserve and demand especial recognition on account of the fact that their etiology has been so thoroughly recognized through the agency of roentgen rays. Basing their clinical deductions upon the roentgen evidence afforded them, a group of practitioners, especially Goldthwait of Boston, have not only demonstrated the co-relation between alimentary (especially intestinal) stasis and certain non-tuberculous joint-manifestations, but they have been able to recognize certain types of joint-aberration as arising from infection and others from chemical influences. Of this, the literature of the last few years contains much. To mention, also, those who have demonstrated, from the standpoint of the roentgenologist, the manifold possibilities of delayed intestinal digestion is but to name the foremost roentgenologists of the day. The literature upon this aspect of the subject is, likewise, anything but meagre. By even a cursory perusal of this mass of published work a horde of questions arise in one's mind. For example: Why are some individuals constantly constipated, although as to age, temperament, physique and activities they are diametrically at variance with the general conception of the picture of constipation? Why, in some instances, does it seem that non-tuberculous joint-disease may be hereditary, so called, and in others not? Why, as Codman asks, is it that some patients, who are obviously not distended, complain of distress from gas? Why do offspring of the same family present the same general subjective manifestations of constipation, although their environment and their detail of living has been different for years? These questions are by no means all that surge into the contemplative mind and their answers must be sought.

Therefore, today, the writer ventures to suggest, at least in so far as the arthritic cases are concerned, a deeper search into the possible causation thereof. Through the continued good offices of x-rays we daily recognize the congenital veils and Jacksonian membranes, the Lane's kinks, and pericecal adhesions, but is the nomenclature, after all, a clear one? When we say a membrane or band is congenital, can we eliminate the co-existence of an acquired post-inflammatory adhesion? Our true classification, the writer feels must go behind and back of our roentgen appearances, and his impression has been strengthened by many suggestions made by Goldthwait, with whom the writer has had the good fortune to go over a considerable series of cases.

In the *Johns Hopkins Hospital Bulletin* for November, 1912, R. B. Bean, associate professor of anatomy in Tulane University, New Orleans, presented the records of some striking observations made by him with reference to human morphology based upon his studies when in residence in the Philippines, as well as upon some comparative studies as between the white and black races in New Orleans. He arrives at a most ingenious ontological nomenclature. He has been able to classify man's form into subdivisions based upon the two fundamental embryonic tissues, epithelium and mesothelium. He finds that each form is most susceptible to affections of those organs which are developed from its respective embryonic tissue. That form arising from epithelial embryonic tissue is most susceptible to affections of the lungs, nervous system and alimentary tract; the one springing from the mesothelial, he finds is more susceptible to affections of the circulatory system and kidneys, therefore, one he terms the epitheliopath and the other, the mesotheliopath. By certain physical characteristics, namely, the ear, the

physiognomy and the stature, he is enabled further to class the epitheliopath as the hyper-onto-morph and the mesotheliopath as the meso-onto-morph. The hyper-onto-morph, which is the form interesting to us today, he found to be either tall and slender, or small and delicate, with broad forehead and small chin, eyes wide open and close together,—in short, the fundamental European form. In this epithelial type, or hyper-onto-morph, he found the intestine to be short, twelve to fifteen feet, while in the mesothelial type it was long, twenty to twenty-five feet. He often amazes his students, at a dissection, by predicting the length of the intestine by means of the conformity of the external ear. Into an explanation of this classification it has thus been necessary to enter here as a basis for a possible theory as to the causation of so much alimentary disturbance in a certain well-known type of patient. All practitioners know the type: the lean and tall, or the small and delicate nervous and high strung, often very active in habit, but many types possessing a sort of purposeless activity, unstable, querulous, oftentimes irritable; many, possibly, with a muddy skin tending toward sallowness. This corresponds to that which Sir Frederick Treves has called the carnivorous type of human conformation and habitus, as opposed to the larger, more flabby, more sluggish, more peaceable of mind and less nervously developed type, which he calls the herbivorous type. Even the clinical history, in the human carnivora, so to speak, is characterized with relation to their alimentary aberration. Oftentimes the deficiency has been observed from youth, and almost invariably we hear that it has been existing for a long time and possibly, the patient may say, since the days of childhood. Is it not possible, that, in this type we may find an abiding place for chronic gastro-intestinal aberration which can be based clearly upon a congenital hypothesis? This "carnivorous" type corresponds closely with the *hyper-onto-morph* of Bean's classification, in other words, the type susceptible to affections of structures which are highly developed from epithelial embryonic tissue, namely, the lungs, the nervous system and the alimentary tract and the type in which an anomalous length of intestine has been so constantly found by him.

Goldthwait's attention has been drawn to this type of individual; the carnivorous type, if you please, or the hyper-onto-morph or the epitheliopath, by the statural or structural characteristics it presents and through which it naturally appeals to the orthopedist. He has been able to recognize the type through its faulty position, round shoulders, its lack of poise, its contracted chest, prominent scapulae and relatively protuberant abdomen. Family habits of carriage or occupational resistance to proper poise may, of course, be found in individuals varying widely in weight and general physical attributes, but this complex of clinical postural defects is sufficiently constant in relation to many of those classified formerly as "neurotics," as to be striking indeed. It will be seen on consideration that the "neurotic"type, so called, conforms accurately with one subdivision of Bean's classification as well as that type of individual presenting that which Goldthwait calls the congenital type of visceral ptosis, which he is able to trace back through early life. The faulty attitude and posture, often combined with rapid growth, become sooner or later associated with poor digestion, characterized by fickle appetite, foul breath preceding attacks of vomiting, as well as intestinal flatus and colic. That there is an embryonic basis for this type of individual Goldthwait believes. Only on this ground can we give reason for the gastro-intestinal appearances which we often see in young children. Many children, he declares, are born embryonically too soon, while the stomach is as yet incompletely differentiated from its tubular embryonic form and the colon not yet mesenterically adherent to the posterior abdominal wall in its ascending and descending portions. Thus the colon offers, in extrauterine life, insufficient support to a stomach in itself lacking in sufficient embryonic development. Only when the child begins to assume the erect posture do the results of this developmental arrest begin to assert themselves. Arbuthnot Lane's classical contribution upon the formation of developmental adhesions give dependable support to this very question. It has remained for the roentgenologist to illustrate, through his daily observations, the practical application of this hypothesis. Conditions which can be directly traceable, it is believed, to the congenital type of visceral ptosis have been described in the published reports of the foremost observers. Those way stations in the alimentary tract which have been of the greatest interest to roentgen workers are within areas of co-relationship between movable and fixed points. For instance, the relation of the stomach to its cardiac and pyloric fixed points, the relation of the terminal ileum to the relatively fixed point of the cecum, the relation of the colonic flexures to their posterior mural fixed points, the relation of the transverse colon to the fixed points of the colonic flexures, and so on. In certain cases (and after a moment's thought it will occur to many that such cases are often seen in the human "carnivora") x-rays, as well as auscultation and percussion will reveal the long-hanging bag of the so-called ectatic stomach. The writer has come to speak of this as the "inverted goose-neck" stomach and its conformity will at once arise in the memory of all those who have observed it with any frequency. At the lowest point of this stomach, the stagnant food lies in the form of a residue of greater or lesser extent. We are wont to speak of the walls of such a stomach as atonic. Atonic they undoubtedly are, but the atony is often seen to be out of proportion to a lack of tone elsewhere in the individual. Is it

unreasonable to assume that this elongated viscus may thus be susceptible to ectatic influences on account of a lack of embryonal development? In other words, that it has not advanced to a sufficient degree beyond its fundamental tubular form? What roentgenologist has not unexpectedly come upon the existence of such viscera!

Around and just distal to the pyloric orifice we come upon a region of even greater moment, in which the congenital influence is just as important, if not more so. The duodenum is another fixed point and will not give way to the influences of dragging and gravity without assuming great distortion of its normal contour. If there is pull and drag there is usually an inhibition of blood supply which in turn sets up a local anemia, in time, possibly, gangrene and then a process of ulceration. Why, indeed, should not duodenal ulcer be common? Again, distortion of the duodenum by pull and drag produces defects of emptying as they do defects of filling,—another chance for the absorption of bacteria! Moynihan has said that it is now generally accepted that gall-stones are caused by infection. Gregory Cole writes that the indirect roentgenological evidence of gall-stone is really more valuable than the direct evidence. He believes that the deformity of the duodenal cap (the first portion) "and the pars pylorica . . . are stronger roentgenological indications for surgical procedure than the presence of calculus in the gall-bladder." Of course this is so, and unless the cholecystic and pericholecystic conditions thus indicated are recognized, the patient is not going to get well! Cole goes on to say that "it is immaterial whether the infection is due to gall-stones, typhoid or some unknown cause, or whether it has been of sufficiently long standing to allow the formation of gall-stones." The writer stands here today as the champion of the "unknown cause," which indeed may have its incipiency *in utero!* He believes that acute cholecystitis is relatively, of itself, rare and that to classify it as an acute exacerbation of a chronic cholecystitis is infinitely more correct. Thus can we wonder at the occurrence of adhesions? Can we marvel when we see, as we do, the evidence of such adhesional influences in young people? Moreover, such influences in old or young are far-reaching. Cole considers the adhesional effect of gall-bladder disease upon the hepatic flexure as important. The writer thoroughly agrees and believes, as he will endeavor to show, that, so influenced, the hepatic flexure offers even greater opportunities for bacterial growth and absorption.

The ileocolic region offers the next great center for delayed traffic and here the individual's alimentary powers not only have to contend with a movable point dragging or twisting upon another which is relatively fixed, but also the situation is here made more favorable for septic absorption by certain *normal* motor manifestations. The discovery of anastalsis in certain lower animals by Cannon and Case's verification of the occurrence of antiperistalsis in man, not only in the proximal but in the distal colon, offers a check to prompt elimination from viscera influenced by postural or adhesional drag. If the ileocolic valve is incompetent, as Case and others found in the proportion of one to six, the situation becomes all the worse.

It is the occurrence of developmental variations in the length of the colonic mesentery or, as has been said, an arrest in embryonal progress tending to the normal disposition of the mesentery which is of so much importance in this congenital type. The question of atony need not enter primarily into the matter nor the question of adhesional influences until after birth or until the erect posture is assumed by the growing individual. Here arises again the phenomenon of perverted relationship between fixed and relatively movable points, in this instance at the right and left flexures. Two normal conditions are to be met with in the bowel which tend to emphasize the bad effects of increased angulation. Such aberrations near the hepatic flexure are accentuated by the effect of the physiological tonic constriction ring in the transverse colon just to the right of the median line, described by Cannon in cats and by Case in man. On the opposite side, the anatomically high placement of the splenic flexure marks a steep grade of ascent thereto from a transverse colon, which may be but loosely supported by a long mesentery. It is not hard to appreciate the effect on the flexural bowel by such drag and pull. Blood supply is deficient and anemia and possible gangrene ensue. Nervous stimuli are deficient and perfect haustralation is lost. The mucosa is broken down and to its ulcerated surface fecal masses adhere, setting up undue putrefaction and absorption of the products thereof. The writer believes that there is a chance for much study, in a way roentgenological, of the colonic flexures, not merely as mere angulations, but as receptacles or reservoirs, if you please, for content-stagnation, with its manifest effect. Quimby of New York has considered well the matter of colonic angulation, although he discusses the matter of mechanical inhibition to its function as a phylogenetic manifestation rather than an entogenetic one. The writer feels that the presence of putrefactive masses and gas within the flexures constitutes a handicap to its proper physiologic filling and haustralation and that we can recognize and describe roentgenological flexural filling defects as well as those presented, for instance, in the duodenum. The situation is a bit more complicated, to be sure, but the possibility promises much in the way of diagnostic refinement.

To revert to the peripheral joint-manifestations of auto-absorption, with which this paper deals, it must not be assumed that intestinal auto-intoxication produces joint lesions alone or that other sources of infection do not share with the hollow viscera the questionable honor of

creating joint manifestations. Again, to speak concretely, it may be but accidental, in our above described congenital type, that the *joints* show secondary change at all; the symptoms may be far more diffuse, corresponding generally to those of the chronically constipated. Conversely, the picture of congenital stasis may present as well suspicious teeth and tonsils. The pharyngeal and cervical glandular manifestations have been a classically described symptom of Still's multiple infectious arthritis in the young.

It has been found that certain types of arthritic pathology, of which, possibly the so-called hypertrophic form may be taken as an example, are, apparently, engendered by an interference with the normal intestinal chemistry by which bacterial reproduction is controlled. May it not be an open question, as Goldthwait says, as to whether or not those joint changes, which we have previously ascribed to metabolic deficiency, may be classified in the same general gamut; in other words, may not our so-called metabolic aberration be merely the middle ground between our mechanical and supportive alimentary defects as a cause and our joint manifestations as a result?

A table which I shall presently take the liberty of showing represents a comparison, with reference to their cardinal signs and symptoms, as set forth in the writings of four standard observers, between certain chronic intestinal conditions of a physiological inhibitory nature and a certain so-called "constitutional disease" presenting joint manifestations. It is not asserted that the contents of this table are conclusive or even striking, but to the writer they are at least suggestive of the possible existence of a common source for many instances of all these afflictions just as all European peoples can trace their origin to the Aryan race. Deep consideration of this hypothesis will at least convince one of the futility of attempting to control, in the hope of success, the progress of these cases by local therapeusis. It is a question indeed as to whether or not the originator of the term "constitutional disease" "builded better than he knew," since he must have failed to appreciate a morphological basis for such manifestations.

What is the full significance of the congenital predisposition to systemic infection as it occurs to the mind of the general practitioner? How can he best apply his influence to the betterment of such conditions? The whole matter should be for him a part of that great problem we are facing today—preventive medicine. It is the general practitioner to whom we look for true picket-duty in the great conflict against disease by means of the accoutrements of prevention with which we are seeking constantly to arm ourselves, and the peripheral sensory nerves of any army are the outposts thereof. It is the general practitioner who is destined to first scent the hostile smoke and who must always combat the initial attack. Properly to pursue his picket-duty, he must be constantly on the alert to recognize among those with whom he comes daily in contact and in whom disease is merely waiting for the chance to assert itself, a type, a point of vantage, as it were, in which our common enemy seeks to gain a foothold. Such a foothold may be in the little child who, by virtue of congenital circumstance is about to offer this vantage ground. From this possession, the influences hostile to health can be wrested only by the upbringing of that child in such a manner that from year to year the situation becomes more and more untenable for the enemy. The mode of attack is a matter without the province of this paper to discuss, but the writer will say that there must be formed immediately a triumvirate for prevention, which shall be made up, first, of the general practitioner; second, of the roentgenologist; and third, of the surgeon, the orthopedist or the general therapeutist, as the case may demand. The function of this triumvirate is obvious and the duties of each member are clear and well-defined enough. Its chief task, however, shall be to recognize a type, or status, a diathesis, if you please, which heretofore has too often failed of recognition. To this status, or type, the writer ventures to give the name of *abdominal viscerosis,* and a full recognition of the existence of such a status will be justified in full by the number of abdominal viscerotics which can be treated properly only through a clear sensibility of the true nature of their predisposition.

	Chronic Rheumatism (Strict Sense)	Arthritis Deformans	Gout.	Gall-Stone.	Constipation.	Visceroptosis (Glénard) Type 1	Type 2
Age	Past middle life	30—50	30—50	Over 40	Age of lessened activity	No bearing	
Sex	Male	Female	Male	Female	Female	Women	Usually female
Habitus	Slothful	No especial bearing	Slothful	Lack of exercise (Strümpell)	Slothful	No bearing	Active
Hereditary influence	Rare in youth	Hereditary	Hereditary	"Has been observed in the newborn" (Strümpell)	Hereditary congenital	No bearing	Young

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DESCRIPTION OF PLATES.

(The process of reproduction reverses the right and left aspect in these illustrations.)

PLATE 1 represents a portion of the intestinal tract in a child of nine in whom a most pronounced degree of constipation has persisted ever since birth. The bowels from early infancy have failed to move normally and have been assisted with the usual routine of mild laxatives and soap suppositories. Within the last several months a train of symptoms has slowly arisen which demanded professional attention. The child complains of headaches, is undersized, is called nervous and easily cries. The breath is foul and there is periodically a series of unaccountable vomitings. The case has been recognized as one of weak digestive powers and has been generally accepted as such. This plate illustrates the situation at a *six-hour* interval, post cartum. Much advancement has been made in spite of the evident aberrations in the course of the large gut. In other words, the subjective manifestations seem to rise from the colonic abnormality rather than any difficulty affecting other portions of the intestinal tract. The general course of the large intestine at this time is shown merely to offer the suggestion of a general mesocolon evidently congenitally aberrant. This case lacks the multiplicity of visual evidence which can be presented by others, but it is shown on account of the often unexpected disposition of the large intestine in the young.

PLATE 2. The same case at nine hours.

PLATE 3 represents the case of a young person of eight who was apparently much below this age in point of development and, to whose physician, two cardinal objective symptoms were presented. On the one hand, an extremely foul breath, and on the other, a clubbing of the finger tips. Beyond this there was nothing presented of great moment except a degree of constipation which the young parents thought to be inevitable in a child of this age, associating, for some unknown reason, a condition of constipation with childhood. The Röntgenological evidence of the distribution of food in the intestine at a twenty-four-hour interval, post cartum, presents distinctly the type of condition described by Goldthwait and Jackson, namely, "delayed traffic" to the extent that there exists in this case at the hepatic flexure, or thereabouts, a degree of extraneous material which is believed to be the direct result of local putrefaction. It is this material which is most visually to be recognized as gas in overabundance which the writer believes accounts for many cases of so-called "filling-defect" at the flexures. The delay in the ileum is also seen. The mass-movement in the distal transverse colon is irregular and actually slow. This child has not been treated except by means of abdominal external support and general attention to hygiene. She has distinctly improved, the foul breath having totally disappeared.

PLATE 4. represents the case of a boy of seven in whom the chief objective symptom was an intermittent diarrhoea, the attacks of which were severe and profound. Subjectively much pain persisted, not only in conjunction with the diarrheal attacks, but also during the interim between them. This pain was referred especially to the right iliac fossa, but was also felt upon the left side. The original diagnosis was that of an appendix with recurrent attacks.

The record here shown is one in which the exposure to x-rays was made at a six-hour interval, post cartum. There is a degree of residue within the ileum which perhaps is not unreasonable at this hour in a child of this age. The colon is seen to be distended. Its haustralation is irregular, with the presence of much gas, which greatly distends the lumen of the colon. The course of this gas indicated to the observer that, possibly, there might be a congenital aberration in the length of the mesocolon with reference, possibly, to the mesocolon of the transverse section as well as in the immediate region of the descending colon.

On operation it was found that the transverse mesocolon was unduly short whereas the mesentery acting as a support for the descending colon was of undue length in comparison. The child presented generally the type of so-called congenital abdominal "viscerosis" although its growth had not, up to the time of the examination, been very rapid. Constant headache and gastro-intestinal attacks, however, suggested the Röntgen examination.

PLATES 5 and 6. These were made from a series in two cases representing two sisters and illustrating similar counterpart cases which are often seen in members of the same family. These girls, at the time of examination, were respectively twenty-four and eighteen years of age. The first case presented no gastric symptoms whatever, but a marked and increasing constipation for the last four years. More or less ileocecal discomfort, but no attacks which have been clinically diagnosticated as due to an appendix nor has she been operated on for an appendicitis. She has had no especial headache nor periods of mental or nervous depression.

The abnormality seen by x-rays, at a six-hour interval, post cartum, is one chiefly of an aberration in relation between the right half of the transverse colon and the ileocolonic structures. Since the history of constipation began she had suddenly a severe pain in the right knee which is persistent, although no other joints present any undue manifestation. The knee is swollen and is limited as to normal motion, but is not unduly hot or tender. The patient wonders whether or not this knee may be due to dancing and it would not give her concern except for its persistency.

The other case presented in many details the same picture as that of her sister, who was previously examined by the writer about four years before. Subjective symptoms in this case, however, were much more severe than in the other. Constipation was marked and was attended with more subjective manifestations than were to be noticed in the case last described. The interrelation between the proximal colon and the right half of the transverse colon is characteristic and subjective. For this condition, which was believed to be of an adhesional nature, she was operated and a series of broad bands were freed. The sister first described has been put upon a course of albolene and at last reports was doing fairly well.

These two cases illustrate to the writer's mind the likelihood of similar manifestations appearing in the same family and the occurrence of a marked condition in either mother or one child of a family, should, he believes, put the practitioner on his guard for such manifestations in others. These two girls could not be said to be pursuing a dissimilar mode of life. They were the children of fairly wealthy parents and, it is presumed, were under the same family influences. These two cases, therefore, are perhaps not so distinctly exemplary of congenital influences as are the following:

PLATES 7, 8, 9, 10, 11. These are records of two sisters who, although having great physical similarity, nevertheless, have for some years pursued devious habits of living. At a six-hour interval, post cartum, (7) one will see that although the ileum should be by no means empty normally, nevertheless, the proximal ileum in this case presents a more copious distribution of food than should be seen even at this interval. At a nine-hour interval, (8) a great deal is to be gathered in the way of diagnostic information. The stomach still contains a marked residue which is consistent with its pronounced ectatic form in the early exposures, not shown here. The transverse colon is low in position; its hepatic angle is accentuated. Evidence of ileal stasis is to be seen. The appendix is, apparenty, by virtue of its position, involved in the general adhesional process. At twenty-four hours, (9) the engorgement of the cecum and all of the colon proximal to the hepatic flexure is to be noted. But erratic and sporadic mass-movements have, apparently, taken place distal to the hepatic flexure.

The other case presents very much the same situation. The plate shown is that of a nine-hour interval, post cartum, (10). The stomach in this case contains an appreciable residue which, to the writer's mind, as in the other case, is due not only to the degree of ectasis present, but also to periduodenal or peripyloric inhibitory adhesional influences. There is ileal stasis, although the interval is but nine hours, post cartum. At twenty-eight hours, (11) the cecum is seen to be engorged, the influence to which end is, possibly, located around its distal portion. Much gas is contained at the right flexure and the relation between ascending and right transverse colon is clear enough.

The two cases illustrate well, as examples, the carnivorous type of being. These girls are lean, almost, in the case of one, emaciated, pinched features, extremely active sensorium; sallow, swarthy skins and, as a whole, distinctly of the type we have been in the habit of calling "neurotic." One, however, lives in the apparent quietude of home life with opportunities for regular eating and habits of excretion. The other works as an operative

in a manufacturing establishment. She is obliged to eat somewhat irregularly, or rather to eat insufficiently during hurried opportunities. A strong suggestion of family tendency toward alimentary visceroptosis is offered here.

PLATES 12, 13, 14, 15, 16, 17 represent a series of six intervals made from a larger series, in a case which is interesting, as exemplifying, it is believed, a certain type of intestinal stasis. The appearance herein shown, while less demonstrative than many records of other observers will, it is believed, be familiar at once to the Röentgenologist just as the symptoms presented by the individual will be familiar to the clinician. This patient, a woman of thirty-five, has been annoyed by a manifestation of constipation through the influence of which she has gone without motions for days. This affection has been existent for many years. She is unable to move her bowels without the assistance of artificial means which, of course, has gradually lost its effect. Much headache, much muscular stiffness—she becomes very despondent at frequent intervals — gives no history of definite rheumatism, but is much annoyed by neuralgia, particularly of the facial type. Considerable abdominal soreness and tenderness on pressure.

The Röentgenological findings, as presented by these plates, are extremely interesting. At an interval eight hours after the meal (12) the ileum is found to be normally empty—the cecum engorged, as well as the ascending colon below a level corresponding to the iliac crest. Above this level there seems to be an effort toward advancement into the right flexure proper. From twenty-three hours, post cartum, (13) to thirty-two hours, (14, 15, 16, 17) this advancement has subsided and the entire mass of food is packed into the cecum and ascending colon below the above mentioned level. It is believed that here we have one of those situations wherein anastalsis, being in the ascendency, is acting as an inimical influence to the passage of food and resulting in an engorgement of the cecum. There is presented little evidence of advancement, but there is suggested the existence of an inhibitory entity, possibly of an adhesional nature, which is shown beautifully at a twenty-seven hour interval (16). At a thirty-two-hour interval, post-cartum, (17) again there seems to be an effort at advancement over the right flexure. The constriction-band at this moment seems to have caused a distinct separation between the distal and proximal masses of content. This case, I believe, shows well as an example of those instances where normal peristalsis, interfered with pathologically, is unable to overcome the influence of antiperistalsis and whose antiperistalsis, though primarily normal, becomes here secondarily abnormal.

PLATES 18 AND 19. These are also indicative of conditions found in cases similar to those already described. At a six-hour interval (18) gastric residue exists. A strong suggestion of the reduplication of the large bowel is seen and this suggestion is converted into a certainty when the record made at twenty-four hours (19) is presented. Here the flexure is filled with the effects of content-decomposition in a "filling-defect" made inevitable by the presence of these influences. A suggestion of a possible constriction-band is offered in the distal cecum. The case was one which can be clinically listed as that of an abdominal viscerotic of a marked type.

PLATES 20 AND 21. These present the case of a gentleman who is virtually a cripple from arthritic manifestations of which he has been the victim for years, although his early life was free from such influences. He presents at nine hours, post-cartum, (20) a comparatively good arrangement of the large bowel, with the exception of the presence of much decomposition at the area of greatest apparent stagnation. His cecum is, to a great extent engorged, although the ileocolic valve is sufficient as to function.

PLATES 22 AND 23. These are a part of a series in a lady of fifty who presented, to the writer's mind, the evidence of extra- and periduodenal adhesional influences strongly affecting the contour of that portion of the intestine as described by Gregory Cole. She has presented for years the history of gall-stone attacks. It is likewise believed, as shown by these records, that the hepatic flexure is also involved within the adhesional influence and, consequently, gives rise to the usual symptoms of back-pressure proximal to it which are seen before you. A comparison with the flexure at the splenic angle will show you the apparent comparative freedom of this structure.

PLATES 24 AND 25. These plates illustrate a case of distinct "hyperontomorph." The woman presented, besides the usual symptoms met with in patients of this stamp, a general painful condition which was diagnosticated as muscular rheumatism. The condition, as here seen, is simply a repetition of records which have already been described above. Especially to be noted is the relation of the position of the mid-portion of the transverse colon to the flexural fixed point on the splenic side.

PLATES 26 AND 27. These illustrations present the general peri-appendicular picture in a case which was referred primarily as one of chronic appendicitis. The position of the filled appendix will be seen, but its stereoscopic portrayal naturally elicits a true appreciation of its relationship to the cecum. The ascending colon is tortuous and the transverse colon is, for a certain distance, reduplicating upon it. The cause of the attacks, to say nothing of the general intestinal disturbance, is clearly manifest in these portrayals.

PLATE 28 is presented as illustrating, in large part, abdominal visceroptosis of congenital origin. The symptoms are largely those of constipation in a young individual, intermixed with diarrhea. Subjective symptoms were especially manifest, extending over a considerable period of time. It presents a ptosis by which the median portion of the transverse colon sinks well into the anatomical pelvis. The right and left flexures are acutely angulated and the history suggests that there may be here a distinct aberration in the length of the mesocolon. It is but one of many examples which constantly come to the attention of the Röntgenologist and which are more often testing the acuteness and keenness of the general practitioner

A FURTHER STUDY OF CANCER.*

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FURTHER experience confirms the general truth of the writer's views, expressed in "A Study of Cancer," (BOSTON MEDICAL AND SURGICAL JOURNAL, Jan. 15, 1914.)

Without again going over the argument, the main points in the theory are as follows:

(1.) Cancer a disease of disordered nutrition.

(2.) The probable origin of the growth is in a highly specialized cell or cells which for some reason or other (possibly always trauma) have undergone a retrograde metamorphosis to the point where the power of reproduction, common originally to all cells but lost in these highly specialized cells, has reappeared.

(3.) This reproduction of such reverted cells is caused by a relative hypo-function of certain ductless glands.

(4.) To produce cancer, such hypo-function must be primarily in a ductless gland derived from the same blastodermic layer as are the cells from which the cancer originates. For example, cancer of the breast implies hypo-function of some ductless gland or glands derived from the ectoderm,—the breast epithelium being ectodermic in origin.

(5.) In some vital manner, sugar metabolism and calcium metabolism are involved in the disordered nutrition resulting in cancer.

(6.) The ductless glands at fault in each case have some vital relation to sugar metabolism or calcium metabolism or both. As bearing on the last two points it has been shown that cancer patients in general have a hyperglycæmia, though rarely a glycosuria. Diabetes and cancer are rarely present together. Cancer patients, like tuberculosis patients, have in general also a poor calcium metabolism, the "pre-cancerous" condition resembling in many respects the "pre tuberculous" condition.

Whether the theory be true or not, it seemed not only fair but obligatory to act as though it were indeed true in inoperable cases unless and until something more promising appeared. Two methods of attack suggested themselves. First, to use sugar or calcium or both medicinally on the ground that the hyperglycæmia is an effort of nature to cure and that the failure of lime metabolism might be helped by lime administration. Second, to supply the theoretically failing ductless gland secretion if possible.

With regard to lime, we have done very little because of our ignorance. The writer has collected a mass of material on lime metabolism and the relations to it of the ductless glands but is not prepared to venture any opinion in that direction.

The sugar metabolism literature is bewildering. It furnishes, however, a number of sug-

* Read before the Seventh District Branch of the Medical Society of the State of New York, Sept. 22, 1914.

gestively salient facts for our purpose. Cancer patients have hyperglycæmia, but rarely glycosuria. As a class, they prefer carbohydrate food to any other. The ductless glands theoretically at fault have vital relations to sugar metabolism as well as to cell reproduction and cell differentiation. We found in too many cases to be coincidental a history of glycosuria, then a total disappearance of glycosuria with the development of cancer. Every case of coincident cancer and glycosuria or of glycosuria followed by cancer, where we could verify the facts by autopsy or otherwise showed that the pancreas was involved. The relation of the islands of Langerhans to diabetes is generally accepted. Grant this theory and failure of the islands results in diabetes or in cancer or in both, depending on various other factors. According to the theory, if such failure of the islands results in cancer, the cancer must be in endodermic tissues, the islands being of endodermic origin. So we have always found it in the few authentic autopsies made. In diabetes there is plenty of sugar in the blood but the tissue cells cannot use it and it is passed off in the urine. In cancer there is also an excess of sugar (the same kind of sugar) in the blood with no abnormal escape of sugar. Therefore the sugar is used somehow. We assumed this to indicate a demand for sugar and we fed sugar freely to some hopeless cancer patients with occasionally an apparent cure. A curious statement made by a woman who had worked on an Indian reservation served to put the writer in his place as a discoverer. This woman, hearing that a certain man had cancer, said, "Why don't you treat him as the Indians do and he will get well. Just give him all the sorghum you can get into him."

As to the other therapeutic point of attack, the giving of ductless gland extracts, we have now settled down to three as essential, one each for ectodermic, for mesodermic and for endodermic cancer. We have reached this conclusion from the known facts, from experimental clinical work, from autopsy findings and by a process of exclusion. For ectodermic cancer, pituitary extract. With our present knowledge we use the extract of the whole gland. For mesodermic cancer, *cortex* of the suprarenal and for endodermic cancer, islands of Langerhans. There was no available preparation either of suprarenal cortex or of the islands. In the case of the islands the technical difficulties seem insurmountable. Nevertheless I must record my gratitude to the G. W. Carnrick Co., for making an extract of pancreas containing an unknown amount of the islands but necessarily also of everything else in the pancreas except the enzymes and the coagulable proteids. This preparation I have used in endodermic cancer but I can claim no cures from its use though it certainly has some effect, because the patients live much longer and retain their weight much better than similar patients not so treated. Also at least two of them repeatedly and rapidly lost ground when they ran out of the medicine. Personally I am convinced that if we had a reliable preparation of whatever it is that the islands of Langerhans produce and a suitable method of administration, we could cure diabetes and—let us say—control endodermic cancer. Lacking all this I shall use in these cases the Carnrick preparation as long as they will make it for me. Perhaps we should obtain a more active extract if the tails alone of the pancreas were used, as it has been shown that in the tails of the pancreas the islands of Langerhans are much more numerous than elsewhere.

The same company also furnished me with a dry extract of suprarenal cortex which certainly is active, though I am not yet prepared to report upon its definite value in these cases, not having had sufficient experience. Even the dosage is unknown. We go cautiously for fear of unknown but possible bad effects. But the preparation is surely valuable, not necessarily in mesodermic cancer alone, but quite possibly in certain other nutritional disturbances. There is strong evidence to show that Addison's disease is not at all due to failure of adrenalin, which comes from the suprarenal medulla, but to failure of the cortex. Also the writer has some very suggestive data showing a connection between suprarenal cortex and sarcoma. Three such cases showed marked brown patches of skin for example. These three cases comprise all that have been studied with the cortex in mind.

In the former paper the argument pointed to failure of the generative gland internal secretion or to failure of the suprarenal cortex secretion as the crux of mesodermic cancer. We had no preparation of the cortex and the one case in which testes extract was used (reported in *Clifton Medical Bulletin*) promptly died. There was no particular reason for using the testes extract except that we had no cortex. In fact we were not very enthusiastic about using generative gland extract in these cases, because if those glands are at fault we ought to have a very high percentage of cancer cases among eunuchs, a condition which, so far as I can learn, does not obtain.

In any hopeless case of mesodermic cancer I should strongly urge the use of a reliable preparation of suprarenal cortex.

As to pituitary extract, our evidence so far as the few cases go is conclusive. I will not say that any cases are cured, but absolute evidence is at hand to show that under the administration of pituitary substance pathologically proven ectodermic cancer has disappeared. Whether it will return I cannot say, nor can I say how long the treatment must be kept up, if at all, after the cancer has gone. Experience alone can settle these points. But the fact of disappearance remains, giving great hope that with suitable preparations of suprarenal cortex, of islands of Langerhans, and possibly some others, we may work like wonders with cancer of mesodermic

and of endodermic origin. Meanwhile in inoperable cases I strongly urge the use of such preparations as we have. The Carnrick Company wisely has not put them on the market, but has been most patient and accommodating to the writer in trying to meet the requirements and would doubtless exhibit to other physicians a like courtesy.

In this paper I shall confine myself so far as case reports go to ectodermic cancer. If the points seem well taken there, it is a fair inference that we are working in the right direction on the other far more dangerous and more numerous cancers, cancer of mesodermic and of endodermic origin.

But before briefly presenting a few case histories, let me urge most strongly the matter of autopsies and present a little more confirmatory evidence. If a patient dies of cancer, secure an autopsy if possible. Get a small piece of the original growth itself and also a part of every ductless gland possible. If the cancer is ectodermic get the pituitary; if mesodermic, get the suprarenals; if endodermic, get a part of the tail of the pancreas. Get these certainly and others if possible. If such specimens in 50% alcohol are then sent to the writer, he will be only too glad to have them examined by a competent pathologist.

A large number of such autopsy findings would be of the utmost value either to confirm or to discredit the theory. The writer has been able to find very little in the literature as to the autopsy findings in regard to the ductless glands in patients dying from cancer. What little there is, is at least encouraging. Rupert Ferrant (*London Lancet*, March 7, 1914) reports that in 31 cases dying of sarcoma or carcinoma, the thyroid shows nothing attributable to the growths. This is negative evidence, but consoling at least, because according to the theory the thyroid is not especially at fault.

Case 4, reported in previous paper, a cancer of skin, showed on autopsy a decidedly small and abnormal pituitary body. This is positive evidence, but it is only one swallow.

M. Hirtz reports in *La Semaine Medicale* the case of a man who in 1902 presented all signs of Addison's disease and who apparently recovered under treatment by suprarenal extract. He died in 1913 from cancer of the stomach. Autopsy showed merely a small cicatricial nodule in left suprarenal, presumably all that was left of his Addison's disease. Pancreas apparently not examined.

In the only three cases of endodermic cancer in the past year in which the writer has been able to secure an autopsy, the pancreas has been plainly abnormal. Two of the cases were cancer of the stomach and one cancer of the liver. In the stomach cases the microscope showed carcinoma also of the head of the pancreas. No islands of Langerhans were observable, but the sections were from the head of the pancreas, where the islands are normally of infrequent occurrence. In the liver case the pancreas was about half its normal size, but in gross appearance otherwise normal. Specimens from the tail of this pancreas have not yet been sectioned.

Cancer "families" are easily understandable if our theory is correct, because family "unbalance" in ductless gland function certainly exists and the table would indicate that it is in just such families that cancer very frequently occurs.

Dr. C. M. Moullin (*London Lancet*, March 21, 1914) shows that every cell originally has the power of reproduction but that, as differentiation and specialization progress, many cells lose that power. Moullin argues that if for any reason the highly specialized function is stopped, the cell being alive, the reproductive power returns and we have a tumor. This is exactly in line with the author's theoretical "idler" cells described in the previous communication.

The *London Lancet*, May 16, 1914, in speaking of the Abderhalden reaction in cancer, says that probably this reaction is good only when the preparation is made from a cancer derived from a location similar to the suspected cancer.

The following table is compiled from the case histories known to the writer to be authentic. This table is designed merely to show the instability of ductless gland function in general in the family and personal history of cancer patients. It seems to be very significant, the more so since careful personal and family histories have been taken in these cases. It is truly astonishing to find how suspiciously frequently various abnormalities in ductless gland function occur in the person and in the relatives of cancer patients. Diabetes, goitre, Addison's disease, and nutritional disturbances of the skin are particularly frequent, very much too frequent to be explained by coincidence.

The theoretically assumed "idler" cells discussed in the former communication received an unexpectedly early and authoritative indorsement in the Boston Medical and Surgical Journal of Jan. 8, 1914. Dr. Joseph C. Bloodgood of Baltimore writes in that issue of "Cancer of the Lower Lip" and describes microscopical findings in smoker's burn. The conditions which the writer hazarded as a possibility are there beautifully proven, at least for the cancers in question. Dr. Bloodgood's article appeared in the issue just before the writer's, and furnishes a strong link in the chain. It must be remembered, however, that the actual process of beginning cancer from such shut-in cells has never been observed.

A few years ago a considerable degree of hope was raised because certain authentic cases of cancer of the breast were reported cured by removal of the ovaries. It is clear that a very few of these "cures" were really so. Further experience was disappointing, because, though often a favorable change took place in the growth after ovariotomy, subsequently things

usually went from bad to worse. This method of treatment therefore is now practically discarded. But in view of our present knowledge, and particularly if our theory is correct, the results are understandable.

CANCER OF	PERSONAL HISTORY.	FAMILY HISTORY.
Sigmoid	Arterio sclerosis for years. Diabetes in Fall, 1913, disappearing in January, 1914. Died of cancer in April.	A daughter now has Addison's disease.
Tongue	Hair and teeth very poor.	One brother, a "bleeder," bled to death.
Breast	Teeth decaying badly of late and hair thinning.	Not obtainable.
Breast	Ichthyosis for years.	Grandmother died of cancer. Son has obscure nutritional disturbance of skin. Grandson had melena.
Upper Jaw	Teeth and hair very poor during time growth was present.	Not obtainable.
Tongue	Teeth bad. Hair very thin.	Negative.
Uterus	Hair thin. Teeth poor. Moderate goitre.	Sister, goitre. Father, goitre.
Stomach and Pancreas	Glycosuria before the cancer, none since.	Negative.
Breast	Teeth always troublesome. Hair getting thin.	On mother's side, large, tall people with fine heads of hair.
Breast	Hair thinning past year.	Grandmother, cancer; sister, cancer; aunt, "tumor."
Rectum	Diabetes 10 years ago and until trouble began in rectum.	Negative.
Skin	Teeth and hair bad lately.	Cousin, sarcoma. Family of tall people — many over six feet.
Pancreas	Hair thin and white early in life.	Father died, Addison's disease; sister, goitre (operation); sister, uterine fibroid (operation).

Remember that the internal secretions of the ovary and of the pituitary body are normally in a condition of balance as it were. When the ovary is resting, as during pregnancy, the pituitary enlarges, a sign of functional activity. When the ovary ceases work permanently, as after the menopause or after ovariotomy, the pituitary is still normally active because it has work to do. Now in the case of cancer of the breast theoretically due to hypopituitarism, remove the ovaries and at once the hypo-pituitarism is relatively less and the cancer of the breast is thereby improved. The hypo condition rarely may be entirely overcome and the rare "cures" result. But in general the hypo condition must as time goes on necessarily prevail because all organs fail as age advances and we should expect the pituitary to fail faster than other organs in these breast cancers, because according to the theory the pituitary must have been below normal for the cancer to start at all.

Another experience is that of an Italian surgeon who more recently has reported apparently authentic cures of various cancers by the administration of extract of the entire human fetus. Again, this according to our thesis, is perfectly possible though clumsy and repugnant. We know that certain of the ductless glands are proportionately very active in fetal life. It is quite possible, therefore, that in certain cancer cases, extract of entire fetus would contain a relatively high percentage of just the internal secretion needed to supplement the failing internal secretion of the patient.

CASE 1. Female, age 34, single. Family history unimportant. Personal history: not fond of sweets, but always a vegetable eater, and especially so after trouble started in breast. Teeth decaying very rapidly in past two years. Had a fine head of hair, but recently has been losing it. Skin dry.

In August, 1912, had complete breast operation for cancer. Late in September, 1913, "lumps" appeared in line of incision and glandular enlargements felt in axilla. In October, 1913, when first seen by writer the recurrence was very marked and the patient was weak, had lost much weight and was bedridden. She was delirious most of the time. The case being judged hopeless, she was fed as much sugar as possible in the shape of cane sugar, grape juice, honey, etc.

Late in October the patient had gained in weight and in strength and was clear mentally. She walked out of doors with a nurse. She was then put upon pituitary extract. She gained in every way, the "lumps" disappearing and the glandular enlargement being very much less. This was in January, 1914.

The writer did not hear of her again until in May, 1914, when her physician said she had recently died of acute bronchitis. No autopsy. It is quite possible there was a metastasis in the lung, though her physician thinks not.

CASE 2. Female, age 54, widow. Family history: three deaths from tuberculosis. Grandmother, cancer. Personal history: ichthyosis for years,—hair and teeth excellent for her years. Always in good health.

Twenty years ago hurt right breast and lump size of bean appeared but remained quiescent until September, 1913, when it began to grow rapidly. First seen by writer March 26, 1914. The growth

was the size of a hen's egg, movable and the breast felt everywhere firmer than the other. Axillary glands palpably enlarged.

April 4, Dr. Hastings made a complete operation. Dr. Casey, the pathologist, pronounced it not carcinoma! We must accept his authority, while feeling unconvinced and relieved that the "lump" is not there.

Patient put upon pituitary extract. Subsequent history will be awaited with interest.

CASE 3. Female, age 49, single. Family history: Insanity marked. On mother's side very many tall people with fine heads of hair. Personal history: teeth always troublesome. Patient a large woman with luxuriant hair. In January, 1913, patient consulted writer for menorrhagia. She was regular but flowed profusely for 10 to 14 days. After reasonable trial of ergot, stypticin, adrenalin, etc., with no effect at all, a curettement was done. Dr. Casey reported negatively as to carcinoma. Menorrhagia ceased for a few months and then began as bad as before. Then she was put upon extract of pituitary on the theoretical ground that possibly here was a patient with a family history of moderate hyperpituitarism (many individuals being very tall, large people) that in her case the hyper had changed to hypo; that the balance between ovary and pituitary was therefore destroyed; and that when the menopause should be taking place the pituitary was not equal to its work and the ovary therefore, had full sway. The extract was used only at the time of the excessive flow and with good results. This was in the fall of 1913. We seemed to be getting control of the menorrhagia and were calmly awaiting the menopause when the patient in June, 1914, called my attention to her breasts which were beginning to hurt. To my dismay I found in the right breast a firm mass as large as a goose egg, in the left breast an only slightly smaller mass and axillary gland involvement on both sides. Careful questioning then made it plain that the lumps had been there certainly three or four years but had begun to grow only in the past year.

Operation being impossible at the time, she was put upon 10 two grain tablets of an extract of the entire gland daily. Several results followed. The monthly flowing ceased entirely except for the barest show in July. The pain ceased. The lumps are palpably smaller. Strength decidedly increased.

Several courses are now open. We may operate soon or wait a little in hopes of still further shrinkage. We may even go on with the medication if progress seems to warrant it. At all events the case is of the greatest theoretical interest.

CASE 4. Female, age 34, married. Family history: grandmother, cancer; sister, cancer; aunt, "tumor." Personal history (March, 1914) Hair thinning since 1913. Has a slight enlargement of thyroid. Lump in right breast for two months. Probably much longer but patient thinks not. Not tender, freely movable. Weight 129 pounds.

Advised immediate operation which was declined because of unfortunate results (attributed by her to operation) in other members of her family.

Patient given eight grains pituitary extract daily gradually increasing to 16 grains.

There has been a steady shrinkage of the growth with increase in strength, of weight (now 134), an improvement in color and a filling out of breasts from the flabby former condition. The mass now (Aug. first) is scarcely palpable and is soft and ill defined instead of hard with clearly marked outlines. Hair has ceased falling out.

In this case also the writer is in a quandary as just what course he ought to follow.

CASE 5. Male, age 62, married. Family history: many very tall individuals, one cousin is six feet five inches tall. Personal history: six feet one inch tall, very poor teeth and thin hair. For many years has had a small warty lump size of a pea on side of neck. In June, 1913, this lump began to grow. Consulted the writer Nov. 27, 1913. The patient presented an irregular ragged looking ulcer with indurated edges three-fourths inch in greatest diameter, on right side of neck. This was covered by a crust of pus and dry blood.

Operation though strongly urged, absolutely declined.

He was given pituitary extract eight grains daily increasing gradually to 20 grains.

Steady shrinkage of the ulcer with healing at the edges. July 1, 1914, the ulcer was entirely healed but covered with tissue looking like scar tissue and not like ordinary skin epithelium.

I am inclined to cease urging operation on this man unless something untoward occurs, meanwhile keeping close watch of him.

GUNSHOT AND BAYONNETTE WOUNDS OF THE STOMACH.*

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A BAYONNETTE wound is in all respects similar to any form of stab wound, but the lesions produced by the Lebel bayonnette present certain special characters which should be taken into consideration. The Lebel bayonnette has four sharp longitudinal projections, separated by four corresponding grooves, and its effects have been studied by Sieur in an article which appeared in 1900 in the *Archives de Med. et Pharmacie Militaires.*

He found that the wounds produced in the stomach and intestine were rounded, with irregular and slightly contused borders. In the experiments which Sieur undertook on dogs, he found that after the bayonnette had been withdrawn the borders of the wound came back in contact with each other, causing complete occlusion of the perforation, through which it was difficult to cause the exit of the gastric contents. On the other hand, when the arm remained in place, the grooves formed true gutters, along which the gastric fluid escaped and accumulated in the peritoneal cavity. Sieur is of the opinion that this bayonnette acts by retracting the tissues, rather than by their section or laceration,

*A paper compiled from lecture notes on The Surgery of War.

and this applies to the muscular fibres in particular. A soldier who was wounded by this bayonnette in the epigastric region and who died from a wound of the aorta, showed at autopsy that, although the stomach was full of food and completely transpierced, no gastric contents were found in the abdominal cavity. A young girl who was wounded in the epigastric region by a Lebel bayonnette presented distinct symptoms of gastric perforation but recovered without operation.

Referring now to the most important part of the subject, that of gunshot wounds, it may be said that today the armies of all civilized countries employ a pointed projectile of small calibre, animated by a very great penetrating force. The modern projectile is elongated in shape and of an average calibre of seven millimeters; its length is equivalent to four times its calibre, and it weighs about fifteen grams. The nucleus is composed of an amalgam of lead and antimony, which forms a very hard mass, and is covered at the apex at all events, and usually also on its entire surface excepting the base, with an envelope of hard metal. Of the new German S bullet, the new French D bullet, and other types now being studied in Switzerland and elsewhere, we shall, unfortunately, have an overabundant demonstration of their respective values soon.

The lesions differ according to the distance at which the arm has been fired. Beyond 300 meters, these projectiles produce simple perforations which are small and circular, the bullet entering the tissues like a gimlet, spreading them apart, with the result that the borders of the wound may close together, producing an almost complete occlusion. The opening of the exit of the projectile is generally somewhat larger than that of entrance. When the firing distance is less than 300 meters the lesions vary according to the state of plenitude of the stomach. When the organ is empty the wounds present the same characters as those just enumerated and the resulting disturbances will be slight, but the same cannot be said when the stomach is distended with food, and the result is a genuine bursting of the viscus. Such lesions have been produced experimentally by Delorme and reported in volume two of his work entitled *Traité de chirurgie de guerre*. He states that under these circumstances, besides the entrance perforation, which has the diameter of the projectile, and the exit-perforation considerably larger, the viscus presents large tears and extensive rents.

Gunshot wounds of the stomach are very frequently accompanied with wounds of the neighboring viscera. When the shot is fired at a moderate distance the projectile generally transpierces the subject, passing through the pleura, lung, liver, spleen, pancreas, kidney, or even the pericardium and heart. The minimum of damage is met with when the projectile enters in the area of Labbé's triangle, an area in which the stomach is in direct relation with the anterior abdominal parietes, but even here the organs situated behind the stomach (kidney, pancreas) will probably be involved. In other instances the track of the projectile in the tissues is much longer, when the bullet follows the axis of the body. This is met with frequently in soldiers who were in the recumbent position at the moment they were shot, and under these circumstances the lesions are multiple and varied. In one case the point of entrance was in the anal region, while the point of exit was found in the left sixth intercostal space in the mammillary line . The bullet lacerated the hypogastric vein, perforated the small intestine several times, likewise the colon and mesentery, and also went through the stomach.

Such cases are of no clinical interest, however, because death occurs before any help can be offered, and although such lesions are frequent on the battlefield, there are fortunate instances in which the stomach alone is involved, or at least represents the principal lesion. It is just these cases that we shall more particularly consider when speaking of the operative treatment, when this can be resorted to with the slightest chance of success, as we shall see.

Let me now revert for a moment to what I may term the *area of gastric vulnerability*, and which corresponds to the projection of the stomach on the abdominal wall. Over the anterior abdominal wall this area has an oval shape with its axis almost vertical, or perhaps it would be better to say slightly inclined from left to right and from above downwards, whose greater extremity occupies the left hypochondrium, while the lesser is situated to the right of the middle line corresponding to the pylorus. Its upper limit is represented by a curved line with its concavity parallel to that of the diaphragm, whose uppermost point is at the level of the left fifth rib in the mammillary line. This point undergoes slight oscillations with the respiratory movements.

The lower limits vary. When the gastric cavity is empty they correspond to a transverse line passing at the point of union of the ninth and tenth rib on each side. When the stomach is distended it becomes displaced downwards, and since opinions differ as to this point I will merely say that the most declivous point of the full stomach will be found in the neighborhood of the umbilicus.

The left lateral limit in the state of complete distention becomes confounded with the limits of the hypochondrium. Usually it attains a vertical line, passing slightly to the outer aspect of the nipple. The right extremity corresponds to the pylorus, which is also subject to variations, but which in its mean situation is found behind the eighth rib, this point corresponding to the external border of the rectus.

Over the posterior abdominal wall the projection of the stomach affects a shape similar to the precedent. The culminating point of its upper curved limit is at the level of the eighth rib in the left scapulary line. In the middle

line, its upper limit corresponding to the lesser curvature, obliquely crosses the spine from left to right and from above downwards, extending from the left side of the tenth thoracic to the right side of the first lumbar vertebra. When the stomach is distended the lower limit reaches about to the spinous apophysis of the second lumbar vertebra.

Let it not be understood that a wound whose orifice of penetration is located outside the limits of the area here given may not involve the stomach. With fire-arms this can perfectly well happen, but in this case involvement of the stomach is rather the exception.

Gunshot wounds are the most frequent of any in battle, lesions from the bayonnette are the exception. Usually the damage done by the projectile within the abdomen is so extensive that death results at once. Logically, it may well be argued that a laparotomy is indicated to control the dangers of intra-abdominal hemorrhage, and above all, the effusion of the gastric and intestinal contents. This is what the majority of surgeons thought who were called into action in the South African War, and everything had been prepared for the treatment of abdominal wounds by immediate laparotomy. But the results of this practice quickly showed that the mortality of the operated cases was greater than of those patients treated by temporization, and the conclusion of all the great amount of matter that has been written on the subject is that a great number of those thus wounded die before they are removed from the field, that among those removed a number die from peritonitis, but that quite a large proportion recover without operation, and that almost all submitted to laparotomy die. Consequently, at the present time opinion is unanimous that abstention is proper, and this is undoubtedly the correct view in the vast majority of cases, since the time required in carrying out these operations is pure loss and could be far more usefully employed in other injuries.

The results were quite the same in the Russo-Japanese war, and it is sufficient to read the article by the Russian surgeon Wreden, published in *The Military Surgeon*, March, 1907, in order to become convinced. In his paper on abdominal wounds in the same war, published in the 84th volume of "Langenbeck's Archiv," Bornhaupt gives statistics of 182 cases treated. All the cases were brought in late to this surgeon and he obtained a cure in 78% of those treated by conservative surgery, while 50% of the operated cases died, but it must be said that the majority of these presented peritonitis at the time of operation.

Peritonitis is the only late indication for operating, and in these cases the operative act should be reduced to the minimum. Simple incision to let out the pus and drain the peritoneal cavity, without searching for the gastric lesions, which, unlike wounds of the intestine, have a much more favorable evolution. However, the existence of lesions of the neighboring viscera may create special indications, such as hernia of the intestine and, above all, intra-abdominal hemorrhage. What has been said of gunshot injuries to the stomach applies quite as well to lesions from the bayonnette, whose resulting wounds generally have a favorable evolution.

The conservative treatment consists in absolute rest and, if possible, the subject should not be mobilized. This latter is the first condition of conservative treatment. Morphine and opium are to be administered and an absolute diet maintained for the first few days, which should be continued just so long as there is any doubt about cicatrization of the gastric perforation. Usually, feeding by mouth can be prudently commenced by the fourth day, but it may have to be postponed for a week or so. During this time rectal feeding is exclusively employed, along with the subcutaneous administration of physiological salt solution.

There are those cases which will die from internal hemorrhage, as I have already said, if not immediately operated on, and this is the only indication for surgical interference in abdominal wounds on the battle-field. But since a laparotomy is undertaken for the control of the loss of blood, after this has been accomplished, it is better, perhaps, to do a complete piece of work since the abdomen is opened, and close gastric or intestinal perforations when present. For this reason, and in order to give a clear idea of the operative technic of gunshot and stab wounds of the stomach, I desire to go into the surgical treatment at some length, although the indications are very restricted in the surgery of war, as I have endeavored to show in what has been said.

Given a case presenting the classic symptoms of intra-abdominal hemorrhage, and supposing that the patient can be transported in sufficient time to the field hospital, the proper incision to be selected is in the middle line in gunshot wounds, because by this a much better exploration can be made and the lesions found. The lesions which cause the hemorrhage may be so serious that even splenectomy or nephrectomy may be required, but wounds of the pancreas or liver can be sutured. Therefore begin at once to examine for the sources of bleeding in the left hepatic lobe, pancreas, spleen and kidneys, because gunshot wounds of these viscera are detected by the flow of blood. When this has been found and the proper treatment applied, one can next proceed to explore the small intestine for perforations, never forgetting the duodenum. Then the stomach is next examined, and I wish to impress upon you the importance of never neglecting the examination of the posterior gastric wall as well.

In bayonnette wounds the exploration of the abdominal viscera need not be quite so complete, because multiple lesions from this cause are infrequent, but nevertheless, the arm may enter

deeply and involve deep-seated structures, such as the splenic or renal vein. Examination of the small intestine need not be resorted to, as multiple perforations from stab wounds are practically unknown. When the hemorrhage has been controlled and the gastric perforation found, you will proceed to deal with it. It is needless for me to go into the technic of thoracotomy in wounds in which the bullet enters through the thorax into the abdomen as it is too formidable an operation to be done in a field hospital and therefore I shall not refer to it.

Gunshot wounds of the stomach usually penetrate both walls of the organ, and median laparotomy is the proper incision. Of the other incisions I shall say nothing because, although they certainly may be of advantage in some few cases in civil practice, they have none in the surgery of war. By the median incision the left hepatic lobe, stomach, spleen and pancreas, likewise the kidneys and intestine, can be thoroughly explored. But in bayonnette wounds median laparotomy is to be done only when the wound is in the neighborhood of the linea alba, otherwise the incision should be made at the point of abdominal perforation, since one has not to search for multiple lesions. When perforation of the posterior gastric wall occurs it is generally seated directly or nearly opposite the anterior perforation, so that it can more readily be discovered by posterior exploration. The intestine is rarely involved and in the few cases where this has been the case the transverse colon has been the organ injured. In cases where the wound is situated in the left flank I believe that the abdominal incision made parallel with the costal border is to be preferred, as it gives an easier access to the hypochondrium and subphrenic region. Should more space be required during the operation a median incision can be advantageously added.

The exploration of the anterior surface of the stomach is usually easy, excepting in the region of the cardia. The gastric perforation usually comes into view when the abdomen is opened, but when it is very small, as is sometimes the case, it must be searched for with much attention. Occasionally, it is seen in the form of an ecchymosis, which must be closely examined in order to discover the perforation. Sometimes it is hidden by a blood-clot, or it may be concealed in a gastric fold. In order to expose the perforation in the latter case, the gastrocolic ligament is incised, and by introducing the hand behind the stomach the anterior surface is unfolded and the perforation brought to light which would otherwise escape attention.

As I have said, the projectile generally perforates both gastric walls and the orifice of exit is usually seated in the posterior wall. In bayonnette wounds the anterior perforation is usually the only one, but it must be recalled that perforation of the posterior wall occurs in about 10% of these injuries. Therefore, the surgeon must not omit exploration of the posterior wall in these cases. Extragastric exploration is a necessary step in the interference in both gunshot and stab wounds, and this is done through the gastrocolic omentum, but when the perforation is near the lesser curvature it is, perhaps, better to go through the gastrohepatic omentum. By this latter route it is easier to suture a wound of the pancreas. An incision in the transverse mesocolon may sometimes be preferred. But these are not methods of choice, because by the former the access is difficult and does not allow one to explore the entire posterior gastric wall, while in the latter, if the opening is at all large and this is necessary, there is danger of injuring the vessels of the mesocolon. It is also better to avoid working in the lower part of the abdomen, necessitated by this technic, particularly when the case is one of stab wound which does not require examination of the small intestine. Therefore, incision of the gastrocolic omentum will be the method of choice, and with a large opening it is sufficient for all operative work, and involving several of its vessels will not compromise the vitality of the great omentum.

When the perforation is in the middle or lower portion of the stomach it can readily be seen and closed through a relatively small opening made in the ligament with hemostats, but the same does not apply when the perforation is seated high up on the posterior wall near the cardia. To accomplish a good suture here, the stomach must be turned upwards in order to expose its posterior aspect thoroughly. The costal borders hinder the operation and it is for this reason that several types of resection of the costal cartilages have been described, but I do not hesitate to say that by median laparotomy, perforations situated high up can be sutured, on the condition that the opening in the gastrocolic omentum is sufficiently large.

It is well to make it extend from the pylorus to the left angle of the colon, and thus one can quickly explore the posterior aspect and carry out a careful cleaning of the retrogastric space. Gangrene of the greater curvature need not be feared if the opening is made two centimeters from the stomach, so as to avoid the gastroomental arteries.

In some special cases extragastric exploration will be insufficient, in which case gastrotomy is to be resorted to, but before doing this a cushion should be placed under the lumbar region, which may render the examination easier and the endogastric procedure may not be required. However, should this be deemed necessary, the incision in the anterior gastric wall should be horizontal, at least three inches long, and made at equal distance from the curvatures. Introducing the hand behind the stomach, the posterior wall is made to protrude through the gastric incision. The mucosa is wiped with compresses, after which the surface is examined. One may thus discover an ecchy-

mosis or a perforation which would otherwise have been overlooked.

This technic, which in gastric ulcer is rather simple, is less so in traumatic perforation, because in the former the gastric cavity is apt to be empty, while very frequently the stomach is full at the time the gunshot injury is received. This being the case, the contents must be removed through the incision, with all due care not to let any of it escape into the peritoneal cavity. Very few surgeons have resorted to endogastric exploration in gunshot wounds, and when it has been done, the incision in the anterior wall has been timidly made, with the result that the posterior perforation has been overlooked. In the case of President McKinley, the anterior perforation was simply enlarged and the gastric cavity explored with the finger, and the posterior perforation was only discovered by a direct examination of the posterior wall.

It is true that simple inspection of the outside of the stomach wall may fail to reveal a perforation, and this has happened in several cases, but it is uncommon if the operative technic that I have advised is followed. Always remember that the perforation in the posterior wall may be in the duodenum.

There is one lesion that may require gastrotomy for its discovery. I refer to contusion of the posterior gastric wall from the projectile. This lesion is uncommon, but it is often the cause of hemorrhage and ulceration. It is also indicated when external exploration does not reveal any lesion sufficient to explain the symptomatology, when, for example, there is free hematemesis due to contusion of the stomach without perforation of the organ. This has been observed in practice. As can readily be seen, the endogastric exploration has a limited field of usefulness but occasionally it may be required.

The closure of the perforations is the same in gunshot wounds as in any perforation of the gastrointestinal canal. When there is much contusion of the borders an economical resection of the exuberant mucosa is indicated. When the opening is at the pylorus or cardiac end of the stomach the sutures should be placed perpendicularly to the axis of the portion involved, in order to prevent stricture. If the loss of tissue is considerable, it is better to suture the perforation to the skin in order to save time. When there is a simple abrasion of the outer coat of the stomach it should be buried under a peritoneal suture in order to avoid future complications.

Free drainage of the abdomen is absolutely necessary, no matter how small the perforation, and should be established in those regions where liquid is most prone to accumulate, the left hypochondrium for perforation of the greater tuberosity, the space comprised between the liver and stomach in perforation of the anterior gastric surface and lesser curvature.

For posterior gastric perforation the retrogastric area must be drained with care, the best manner being through a lumbar incision. It can be done, however, through an incision in the gastrocolic ligament. Packing the retrogastric space may be necessary for controlling slight bleeding from a sutured pancreatic perforation. Absolute quiet is essential for the first few days, and feeding by mouth can usually be begun on the fourth day, but should vomiting occur it must be stopped at once and not again attempted for several days.

In closing let me say that I have only dealt with the operative treatment of gunshot perforations of the stomach as met with in the field hospital, and allow me to again impress upon you the fact that these should never be treated surgically unless laparotomy is indicated for intra-abdominal hemorrhage, as more lives will be saved under the circumstances by a careful conservative treatment.

SEVERAL PRACTICAL FEATURES ASSOCIATED WITH THE MANAGEMENT AND TREATMENT OF OBSCURE ARTHRITIS.

By H. W. Marshall, M.D., Boston.

It seems a fair statement to make that a large proportion of the obscure arthritic cases are treated now only a little better than they were twenty years ago. This does not signify, however, that no progress has been made in the understanding of these troubles, but only that a number of obstacles still block the way very often to successful treatment.

It is true that hundreds of new remedies have been proposed in the last twenty years, and that data relating to chronic joint disease has accumulated enormously in this period. It is also true that many of the new therapeutic agents relieve patients who previously have resisted other measures. Bacterial vaccines illustrate such a comparatively new treatment that has benefited many persons. Vaccines used enthusiastically and exclusively upon all cases, however, also undoubtedly have lessened the chances of recovery among other patients when the latter have happened to possess arthritis of unsuitable types.

If one looks through the entire list of measures which have been suggested, it will be seen that each has its successes and failures, and that proportions of good and poor results do not differ very greatly when any single specific treatment is used in routine manner. Dentists, nose and throat specialists, genito-urinary physicians, dietitians, medical internists, physical therapeutists, surgeons and orthopedists each can recount instances in which their respective special treatments have led to prompt relief of joint conditions that previously were considered obscure; also each can tell, if they will, of

many patients who have *not* been helped in the slightest degree by special treatment.

The noteworthy fact about the present situation is that many practitioners and patients still are in search of specific new remedies, and that they still avoid as far as possible the more difficult understanding of joint diseases in their broad conceptions.

After the writer has been engaged in the study of joint problems for a number of years and has tried to point out the value of comparative studies and of systematizations of the data which have already accumulated, naturally some quite decided impressions of the present situation have been gained. Among the numbers of practitioners who have commented upon the writer's papers the usual remark has been that the articles are too vague. Friendly suggestions almost invariably have been to "find some *definite* new method of value that can be applied in practice so that patients will understand that something really is being done for them."

This attitude of mind among physicians, due primarily to demands of patients for novelties and for easily appreciated, easily applied remedies, it seems is one of the serious obstacles now that limits progress. If one examines the numbers of treatments which have been proposed for rheumatic, gouty and arthritic conditions it is not difficult to see that many are very nearly duplicates of others, and that all varieties are represented which are likely to be needed for much better results than are being attained now if greater skill were being shown. With new forms the advantages gained in one way are largely lost through disadvantages in other directions.

Removal of this obstacle, therefore, depends upon convincing patients and practitioners that only by understanding and application of correct general principles will relief be brought to many cases. Great enthusiasm exhibited over any special method, although it is enough to influence patients to try the remedy; or the alluring qualities of some other cures which appeal to the fancy of patients sufficiently to induce a trial, will not take the place of rational conceptions and comprehensive management.

A second obstacle to progress consists in carelessly assuming that no mistakes will be made, provided all the data and remedies which are needed are at hand. This attitude disregards the fact that any single important defect or omission in treatment, at times can transform even the most brilliant result into a dismal failure. One illustration will suffice to make this statement more clear.

Patients suffering with obscure arthritis frequently are admitted to large general hospitals where their cases are studied exhaustively and where accurate diagnoses are made. Then not infrequently these patients are sent back to their homes because there is no room for them in such hospitals for long periods, when other more urgent cases are seeking admission. The result is they return to the same conditions they previously lived in. These latter are poorly understood generally and often mean inadequate care.

Under these circumstances the time and energy devoted to patients in large institutions is largely wasted as far as the patients individually are concerned. Their money has been spent, their troubles are not relieved and their confidence and hope after such experiences is lost. These errors in management are directly responsible for the ultimate failures; and unfavorable results might be avoided in some instances by having patients stay at home where their cases can be studied in the environment which they must continue in. Sometimes it is possible for the specialist in this latter manner to find simple defects in personal hygiene which have been overlooked and which, when corrected, permit a return to health. The opportunity is presented at least in such a plan of discussing the situation with the local doctor upon whom much depends in the end, and the patients are left in hopeful mood in situations that can be maintained indefinitely, also in positions to receive more intelligent additional suggestions, if necessary, from time to time from a distance.

This illustration is an important one, for besides serving as an example how mismanagement in a single respect may be responsible for failures: one due to lack of skillful application of known facts and not to lack of knowledge of new principles, it raises the question of best management.

All chronic cases cannot be treated in large institutions because a sufficient number of the latter to house all persons would be far too costly; therefore the study of possibilities of home treatments is likely to be one of the important lines of progress in the future.

With the intention of finding out possibilities and limitations of greater coöperation between institutions, special workers, and local physicians the writer has approached general practitioners to secure their views. They universally believe that chronic cases should be treated by themselves; and this attitude is the determining factor in the present state of affairs, namely, that the large bulk of all cases actually are treated by family doctors until patients are relieved or become dissatisfied, or until their local physicians become dissatisfied with the progress made for one or another reason.

They have the following comments to make about institutional treatments and consultants, and since they control the situation, these opinions must be listened to attentively although some relate to economical features as well as to strictly medical ones.

Certain physicians say, "We have not had very satisfactory results when we have sent our cases to hospitals and sanatoria. A few patients come back relieved, but a great many are not

improved and some are made worse; consequently, with these uncertainties it seems to us that we are justified in treating them ourselves as long as the patients are satisfied. Furthermore, we have our successes as well as the large hospitals, and generally we can collect near home all the facts that are needed."

Others remark of consultants who are called to patients' homes, "They do not tell us much that we did not know before and they charge our patients large fees, so that the result in this instance is unsatisfactory also both to the patients and to ourselves."

Why shouldn't these undoubted difficulties between practitioners and special workers be examined and understood thoroughly as well as search made exhaustively for new remedies if progress in treatment is to be made?

And isn't the negative side of the problem of learning to avoid defects and difficulties which prevent greater coöperation as important now, or perhaps more likely to increase numbers of patients relieved, than additional positive work in discovering so-called new cures?

Some difficulties the writer has personally encountered among physicians and patients in New England, will be pointed out and can be introduced conveniently under topics of single consultations; consultation fees; divided responsibilities for management of patients; and peculiarities of human nature.

Single consultations have proven unsatisfactory very frequently because patients' needs vary from time to time. In this way therapeutic measures suggested as appropriate at one time become causes of aggravation of trouble if continued too long in protracted cases. However, single consultations can be said truthfully to be better than none; and occasionally they lead to very good results. They are favorably looked upon by most of the physicians because the latter do not care to have consultants meddle further with their own managements.

The writer has succeeded in getting some doctors, nevertheless, to permit him to see patients again at intervals, and to make repeated suggestions from time to time. Where circumstances have permitted this method it has proven more efficient and satisfactory, and it has certain advantages also to be mentioned under the next topic of fees.

The large fees which are asked for single consultations may be considered as proper ones if they are looked upon from consultants' standpoints, but they do not satisfy patients nor family physicians because they are not followed usually by great benefits.

Consultants in acute surgical troubles can charge comparatively larger sums for single visits, for the reason that the matter is quickly settled satisfactorily through a single decision; but with chronic diseases a number of decisions have to be made at intervals throughout the course of the sickness; and therefore, the total fee, covering all consultations needed to restore the individual's health, logically ought to be approximately the amount of the single satisfactory fee customary for acute diseases.

The consultant in chronic disease must give much more time and thought to his patients for the same remuneration than the consultant in acute ones; and this is one defect which special workers have to realize and to correct by themselves.

Upon the other hand, general practitioners must share, for improved results, the direction with the men whom they called in for advice, as otherwise the person who is called is obliged for self maintenance to collect a reasonably large sum the first time, although it may be more than the opinion is really worth to the patient.

Divided responsibilities mean additional trouble usually to the local physician and anyone naturally prefers to direct his own cases alone. Some doctors have had the disagreeable experience of having consultants assume entire control unasked; and others say they do not like to be assistants simply to specialists who do not know many important details as well as they do themselves.

This group of difficulties also primarily rests with consultants to rectify. They have to recognize that with each chronic case unusual consideration for patients' and physicians' ideas is demanded. Diagnoses and prescriptions cannot be handed out in the quick, confident way possible in less complicated situations; and patients, family doctors and specialists must be ready to work together and be agreed at the outset upon the plan of procedure; and then there is no doubt with harmonious coöperation that results are much better for double control of the case, with the long-ranged, broad view point of the consultant combined with the more intimate knowledge of daily details possessed by the local physician.

Peculiarities of human nature play an especially important rôle with chronic diseases, and should be held accountable for many successes and failures in treatment instead of the existence or lack of suitable remedies which sometimes erroneously are considered responsible for all results.

Frequently there are seen impatient or uneducated patients rapidly turning from one to another method without giving any one a fair trial, and thus becoming victims of their own temperaments. Then there is a class of physicians who are satisfied when they keep their patients contented by catering to their whims rather than to their real needs. Also there is the important group who are compelled from lack of time to treat patients empirically without attempting to learn the general principles involved.

Physicians and patients alike, regardless of circumstances existing, are always ready to assert at any time, however, that they will gladly try a new and really efficient method; but notwithstanding these declarations, impatience,

anxieties, indifference and lack of time will continue to interfere with successes. Obscurities and failures in all these instances should not be put down to lack of general advancement in understanding nor to lack of appropriate therapeutic measures.

There is a second large division into which patients and physicians group themselves; and these show greater perseverance and understanding, also greater appreciation for rational principles of treatment. These adhere to scientific management although results in the past do not seem at a glance to have differed very much from purely empirical ones. General practitioners of this group cast their lot in with institutions and specialists who are laboring to advance medical science and the practice of medicine, slow although such progress must be; and upon these physicians reliance must be placed to a very important extent for coöperation.

When human natures are considered and the fact that one important mistake in directing treatments will frequently prevent success, it should be apparent to everyone that understanding and therapeutic agents should not be held accountable for failures too exclusively.

These facts should suggest, too, that laboratory studies alone, although of great value, have very definite limitations; and the importance of considering all practical sides of the situation ought to be perfectly obvious; particularly it seems the many commonplace mistakes which are responsible for a large proportion of failures deserve discussion and prominence occasionally.

One more mistake prevailing widely among the better classes of patients and even with the best general practitioners will be mentioned. When, in any given instance with them, progress is not being made as it should be, attention is diverted to the search for some new *kind* of treatment, and *quantitative* defects are forgotten. Although remedies in use may be more appropriate in reality than new ones being looked for, the fact that their use for too long or too short periods of time, or with too long or too short intervals between times of administration, or in too small or too large dosages may be responsible for failures, is passed over and not appreciated by a surprising number of individuals, both patients and physicians.

The writer has found in consultations with other doctors that suggestions to them to vary quantitatively therapeutic agents which are in use, or those that have been tried already in the past will not, as a rule, satisfy either the physician or the patient. They insist upon entirely new kinds of ideas, and in doing so make the vital mistake at times that accounts for subsequent poor results.

When successes do attend changes in amounts, durations and frequencies of administrations of familiar remedies the results are accepted in a matter of fact way, and are considered due to trivial readjustments which it is unnecessary to think further about; and the idea that other obscure cases may be due to similar trivial maladjustments usually is one of the last things to be thought of. This is really a very serious defect the writer believes because its commonplace nature obscures it, but it should be insisted upon until physicians and patients realize the facts.

If mechanics tinkered complicated machines in the haphazard way some physicians treat patients with chronic diseases, they would soon do more harm than good. Upon the other hand, satisfactory readjustments can be made with comparatively few simple tools often when these are used with good understanding and skill.

SUMMARY.

The search for and discovery of new therapeutic agents undoubtedly will continue in the future as in the past, and out of many possibilities there will be found a few remedies probably that will be better than some we now have. Single specific measures, however, will never fill satisfactorily the need for comprehensive understanding of joint diseases.

Increased success presumably will come to an important degree from closer coöperation between practitioners and specialists through better defined plans that benefit all concerned, namely, the patients, family physicians and the special workers.

One important line of advance presumably will be through improving the possibilities of home treatments.

Lack of appreciation of quantitative defects in therapeutic methods is a very important stumbling block in the path of progress that is overlooked because of its uninteresting and commonplace nature.

Comprehensive scientific principles are not antagonistic to empirical facts as some persons are inclined to assume: on the contrary, they are built upon many empirical observations. Such broad physiological conceptions are required, however, even in the presence of definite knowledge. As the case is now with gout, so also with other obscure joint diseases, matters of personal hygiene and knowledge of many physiological reactions between organs will presumably continue to be things of greatest importance in treatments despite specific new discoveries.

THYROID OPERATIONS UNDER LOCAL ANESTHESIA.

BY FRANK H. LAHEY, M.D., BOSTON,

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It is not the purpose of the writer in this paper to enter into a discussion of the merits of partial thyroidectomy in exophthalmic goitre, or

the results obtained in enucleation of cysts or adenomata, as the benefit to be derived from these operations will be presumed to have been accepted,—but to relate his experience and conclusions from a small series of operations upon the thyroid gland, using only a local anesthetic. It was with considerable hesitation that the first operation was undertaken on the thyroid with a local anesthetic, as in the first half dozen cases of a considerably larger series done by the writer with ether, many trying situations had arisen, such as severe bleeding obscuring almost completely vessels requiring ligature and concealing the posterior capsule of the gland with its neighboring recurrent laryngeal nerve and parathyroids, difficulty in exposing satisfactorily the superior or inferior thyroid vessels, and other incidents of a disturbing nature, such as cessation of respiration or a threatening condition of the heart.

Most of these being technical difficulties, were soon overcome with an increased number of operations on the thyroid, until it seemed possible that with pains and patience the operation might be accomplished with a local anesthetic.

Accordingly on the next case presenting itself for a thyroid operation the procedure was undertaken.

The patient was given a quarter of a grain of morphia one-half an hour before operation, and the technic followed was practically the same in all of the cases done with this method.

The patient is draped so that a towel or sheet covers the face, but does not lie on it and interfere with the breathing. Its upper edge is upheld by a nurse, who sits by the patient and reassures her throughout the operation, raising and lowering the covering so that the operator may observe the patient's face and converse with her, if it seems necessary to ascertain her condition or to make sure of the integrity of the recurrent laryngeal nerve.

The injection is made preferably with a syringe having a large barrel and a small, sharp needle.

A freshly prepared two per cent. solution of novocain, containing fifteen minims of adrenalin to the ounce, was used in all but two of these cases. In these two cases a one per cent. solution was used, and was not quite as satisfactory.

The first infiltration is made across the neck in the line of the proposed collar incision, and is more satisfactory, in the writer's experience, if made into the skin rather than in large infiltrations into the areolar tissue beneath the skin. Through the plainly visible line of infiltration the skin incision is carried down to the platysma muscle. Care must now be taken in going though this muscle, as it contains a number of large and small veins, the clamping of which often produces a sharp twinge of pain. This is overcome for the most part by the injection of novocain around the larger veins before they are clamped.

The incision across the neck now having reached the sterno-hyoid, sterno-thyroid and mastoid muscles, an infiltration of the flap of skin and platysma made by the curve of the horse-shoe incision is effected by inserting the needle and injecting deeply between the platysma and the two underlying muscles, the sterno-mastoid and thyroid. This flap is turned up, exposing the underlying muscles. A little of the solution is now injected along the anterior borders of the two sterno-mastoids, which are then dissected free from their attachment to the sterno-hyoid. With no further infiltration a longitudinal incision may now be made in the median line through the sterno-hyoid and thyroid down to the anterior surface of the gland. This is enlarged upward to the upper attachment of the sterno-thyroid and downward to the sternal notch.

By careful and gentle manipulation the sterno-thyroid on either side may now be freed from the anterior surface of the gland by sweeping the index finger beneath the muscles upward and downward, gradually farther and farther outward until both sides are entirely clear.

A few injections are necessary now across the sterno-hyoid and thyroid to overcome the very slight pain produced by closing the double set of clamps transversely on either side. Cutting between the clamps is productive of no pain whatever if done with a sharp knife and not with the scissors.

The superior thyroids may next be caught between two clamps, and it has been the writer's experience that, contrary to experiences with blood vessels in other regions, clamping of the vessels leading to the thyroid gland itself is productive of little or no pain.

The removal of one lobe and its isthmus, and, if deemed wise, part of the other lobe, may then be proceeded with as with a general anesthetic. The thyroid itself has little sensitiveness, and the patient complains of no pain from manipulations of it except when it is dragged upon or crushed, either with clamps or in locking double hooks, and then but slight pain.

The portion of the thyroid to be removed having been taken out and the vessels tied, a little novocain is injected in the skin beneath the centre of the collar incision and a pair of snaps worked through a small skin incision until a drain can be caught in their jaws and withdrawn through the drain hole.

The muscles,—sterno-hyoid, thyroid and platysma,—may now be sutured with no further infiltration, and likewise the skin sutured painlessly, even if the operation had consumed an hour in time.

Eight cases in all have been operated upon by this method.

Case 1. A large adenoma of the thyroid, substernal in position, in which malignant degeneration was later found to have taken place. This tumor was about the size of a grape fruit. The difficulty in breathing due to obstruction from its size was such in this case that either was absolutely con-

traindicated. This was removed practically without pain in spite of its retrosternal position, which necessitated considerable dragging upon the tumor.

CASE 2. An adenoma of the thyroid the size of an egg involving the right lobe, so that the whole right lobe had to be removed. The right lobe in this case was excised practically without pain.

CASE 3. A cyst of the thyroid occupying the right lobe and retrosternal for two-thirds of its extent, a depth of about two inches. On account of the necessity of pulling and perhaps because of an old solution of novocaine, there was in this case considerable complaint. The operation, however, was accomplished almost bloodlessly and without difficulty.

CASE. 4 A typical exophthalmic goitre with acute toxic symptoms, in a young girl of twenty. The right lobe and isthmus was removed in this case absolutely without a single complaint on the part of the patient.

CASE. 5 A typical exophthalmic goitre with intense symptoms of thyroid intoxication in a woman of thirty-seven. The right lobe and isthmus were removed in this case, and the superior thyroid vessels of the remaining lobe tied. There was considerable complaint on the part of the patient, who was extremely nervous and apprehensive. There were no technical difficulties in the operation, and the patient stated that a great part of her complaints were due to apprehension.

CASE 6. A typical exophthalmic goitre in a woman of forty with toxic symptoms of moderate severity. The right lobe, the isthmus and part of the left lobe were removed in this case with little or no complaint.

CASE 7. A cyst of the right lobe of the thyroid, combined with a typical exophthalmic goitre with symptoms of moderate severity. The right lobe containing the cyst and the isthmus was removed in this case with but very little complaint.

CASE 8. An adenoma of the thyroid with mild symptoms of hyperthyroidism. The left lobe including the adenoma was removed in this case absolutely without pain.

Technical difficulties in these eight cases have been almost entirely absent, due, I believe, first, to a familiarity with the technic of partial thyroidectomy, acquired by doing the operation several times under ether anesthesia; second, to gentleness and deliberateness; third, to the fact that there is distinctly less congestion of the gland than is present under general anesthesia; fourth, because when in the region of the recurrent laryngeal nerve its integrity may be ascertained by having the patient talk.

The amount of pain in these cases, as one would expect, has varied considerably with the temperament of the individual. In no case, however, has the pain been severe and a considerable part of whatever discomfort suffered is due, the writer is sure, to apprehension, which it is hoped can be overcome greatly in the future with scopolamine and morphia.*

As to the safety of the operation in toxic cases, as compared with ether, it is impossible to say until a larger series of cases has been reported.

At the present time the writer feels justified in saying that with a patient who is awake and able to talk to him in a strong voice, who is able to tell him just how she feels, and who can speak out loud when he is occupied in the recurrent laryngeal region, he finds a great deal of comfort and peace of mind.

He is further encouraged by the fact that should the patient's condition become alarming, after ligature of any vessels already clamped, a dressing may at once be applied without suturing the skin flap, and the patient immediately returned to bed, free from any further shocking or depressing influence, which is not the case when a general anesthetic must be recovered from.

CONCLUSIONS.

It is unfair to draw any broad conclusions from this number of cases.

In this group of cases the operation could not be said to be free from pain, although it was but slight.

The operation took approximately one-third longer than it takes with ether in the writer's hands.

The technical difficulties were no greater and, in the opinion of the writer, somewhat less than with ether.

The post-operative recoveries have been extremely gratifying, and very certainly much more comfortable than in those cases done with a general anesthetic.

The procedure as a whole has been sufficiently satisfactory to the writer to cause him to wish to continue in its use, particularly in toxic cases.

* Since mailing this paper for publication four more goitres of the exophthalmic type have been operated on by the writer under novocaine anesthesia. Two were severely toxic, one moderately and one mildly so.

In the last three cases scolpolamine and morphine have been administered in doses of 1/200 and 1/8-1/6 respectively one and two hours previous to the operation, with the result that the operation has been devoid of even the very slight amount of pain complained of in the most successful cases reported above.

The writer cannot refrain from repeating that a much greater number of cases is needed before recommending this method but that the addition of scopolamine in the last three cases made it nearly perfect in those cases and almost absolutely painless.

Medical Progress.

PROGRESS IN OTOLOGY.

BY HARRIS P. MOSHER, M.D., BOSTON,
AND
GORDON BERRY, M.D., WORCESTER.

(Concluded from page 565.)

SYPHILIS.

With the use of the Wassermann reaction in the diagnosis of hidden syphilitic lesions and with the advent of salvarsan to combat the disease, otologists have gained a very important aid in the treatment of ear diseases. Where we have worked blindly, we can now work with a

A ROENTGENOLOGICAL CONSIDERATION OF THE RELATION OF INDIVIDUAL TYPE TO INTESTINAL STASIS.

Five Plates.

Dr. PERCY BROWN.

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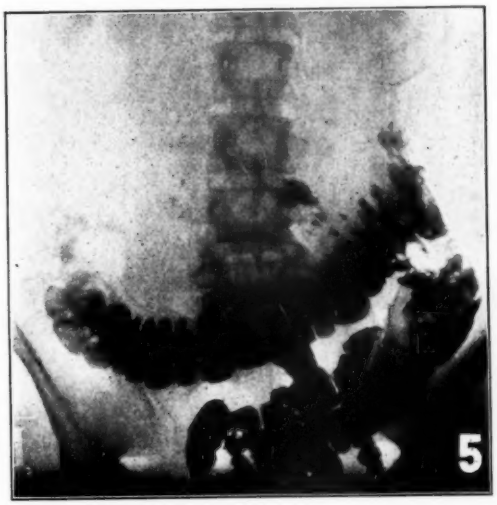
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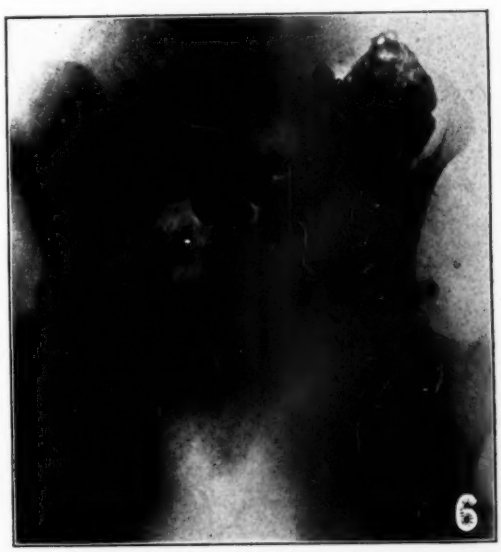
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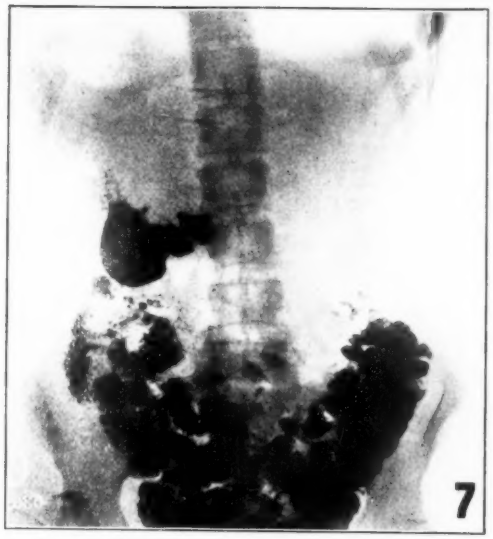
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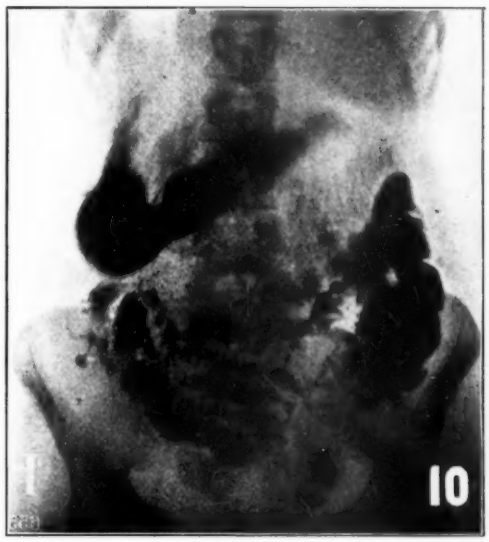
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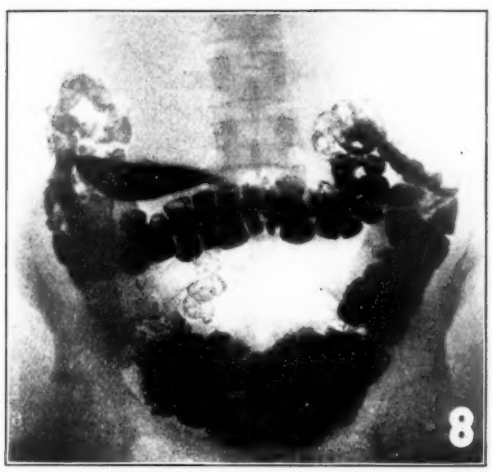
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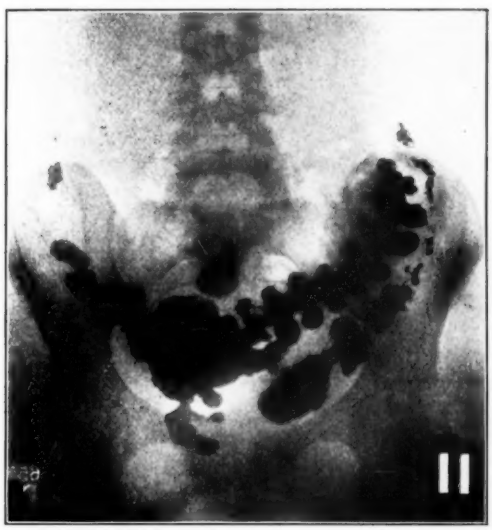
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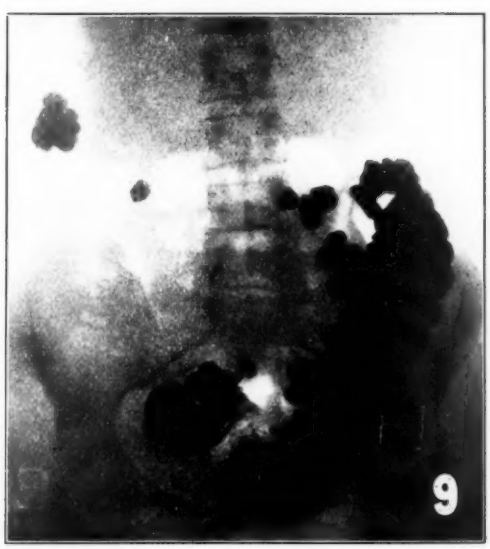
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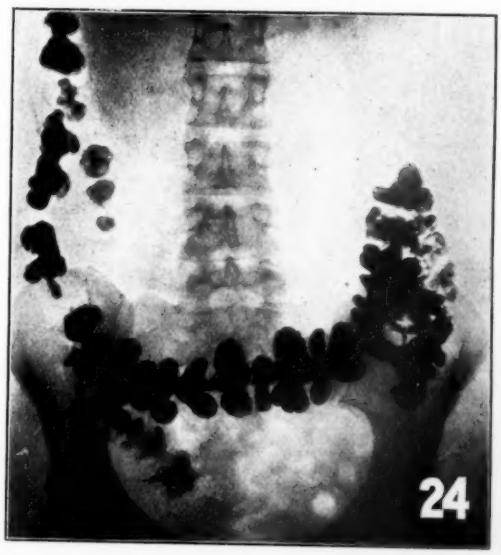
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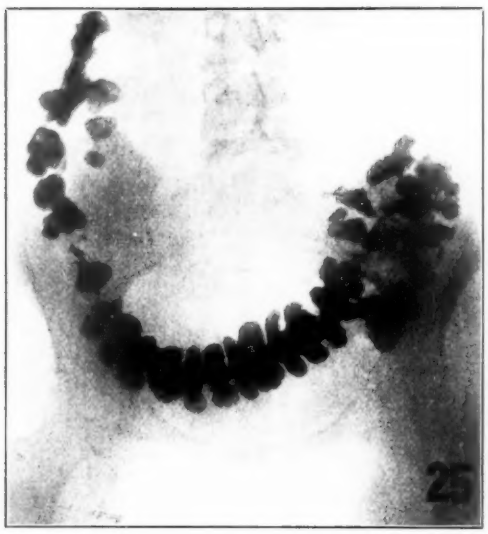
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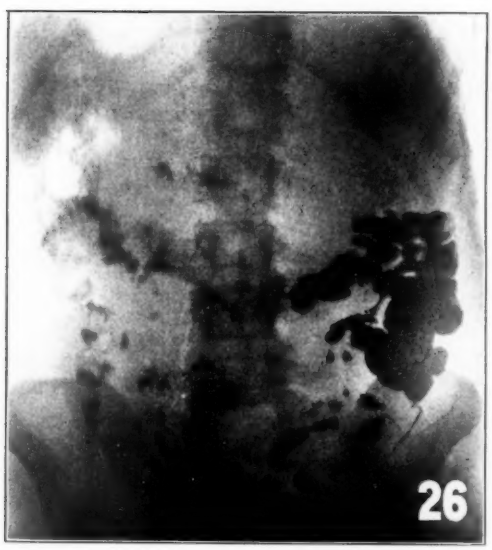
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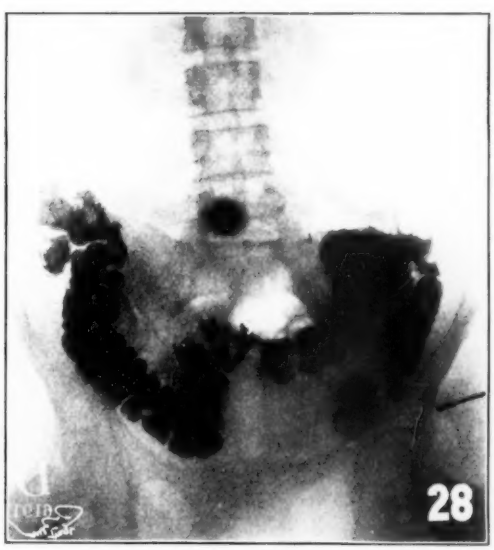
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certain degree of scientific accuracy. True, with the larger experience which time has given us we find that a Wassermann reaction may be positive in a non-syphilitic and still more likely, it may fail to be positive in a syphilitic; nor has salvarsan proved to be the cure-all that it was hoped to be. Literature has been profuse in its reports of cases and its discussion of the value of these remedies. The Wassermann reaction has been used in the endeavor to attach a luetic etiology to cases of obscure internal ear deafness. Where a positive reaction has been obtained, salvarsan has been administered with improvement in some, no gain in others, and with some unfortunate otitic complications; so that the ardor for the use of "606" in these particular cases has considerably abated.

With the initial enthusiasm for "606" it was used in all forms of suspected syphilis with the promise that a cure would be forth-coming; but those with a larger experience began sometimes to discover not only a failure to cure but the presence of unforeseen complications, some of them grave in nature. Among the most frequent of these was found a paralysis of the facial nerve and an involvement of the labyrinth and cochlea. A more detailed review of some of the reports of these investigators will be of interest but must be limited to a few selected cases. Oscar Beck (*Archiv,* 84, 3, p. 174; p. 180; p. 181; *Archiv,* 91, 1, pp. 1 and 6) reported from his large experience ten cases showing untoward aural complications, which prior to the treatment with "606" had normal ears. The majority of these showed symptoms resembling those of a retro-labyrinthine disease of the vestibular nerve: subjectively, vertigo, loss of the sense of equilibrium, and eventually vomiting; objectively, marked nystagmus of a vestibular character toward the sound side, and total non-excitability to turning, caloric, or galvanic irritation tests. In a characteristic case, sudden impairment of hearing came on sixty-five days after the injection; spontaneous nystagmus was present; nor did the condition improve up to the time of reporting four weeks later. Another case showed sudden deafness and irritative symptoms seven weeks after the injection. Symptoms suggestive of a "polyneuritis meniereiformis" developed. A facial paralysis came on with involvement of the trigeminus, and there was total deafness on that side. The other ear was deaf at first, but improved later. The general syphilitic symptoms disappeared not to return at the time of reporting though the Wassermann which had been negative for three months had recently been reported positive. Knick (of Leipzig) reported a very parallel case. Alexander (*Archiv,* 84, 3, p. 175) gives a case differing from those of Beck in that there had already been an internal ear trouble at the time of injection. The patient was thirty years of age, and had shown some involvement of both auditory nerves. Both ears recovered; but several months later there was a sudden impairment of hearing on the left, with roaring noises and a failure of the vestibular reactions. Fourteen days after the beginning of this attack, an injection of "606" was given. On the next day there came on shooting pains in the neck and occiput which continued unchanged. In three weeks and a half there was a fresh attack of tinnitus and deafness with constant vertigo and repeated vomiting. He had then a complete left-sided facial paralysis with total deafness on the left and non-irritability of the vestibular apparatus. The case was reported three weeks later and no improvement had been noted. A similar case is cited by Jörgen Möller (of Fredericksberg, *Archiv,* 84, 2). Geronne and Gutmann reported thirteen cases (*Archiv,* 84, 3, p. 211) and in these the syphilitic infection was recent in all but one.

As to the theories to account for these phenomena, Oscar Beck (*Archiv,* 84, 2) first thought the cause due to a toxic neuritis, but he later abandoned this position and joined Urbantschitsch (of Vienna) and Ehrlich (of Berlin) who working independently both concluded that a local swelling in the region of the vestibular nerve gave this result, and ultimately might cause atrophy of the nerve fibres. Geronne and Gutmann consider that these symptoms may come in the course of syphilis and are only unobserved or not given the importance due them, and that in the case of these complications following the administration of salvarsan we are merely getting an intense repetition of what may happen in the usual course of the disease. To bear out this opinion they point to the fact that these complications have only been found in luetic cases (non-luetics receiving "606" not evidencing these symptoms), and that cases have been reported giving a parallel train of symptoms without having had "606." Beck cites such a case. The man was having a secondary eruption. No salvarsan was given. An attack of vertigo came on suddenly with a severe headache. Examination showed both ear drums normal, and the hearing normal. There was a perceptible horizontal and rotatory nystagmus to the right, a positive Rhomberg, and a failure to react to caloric and rotatory tests for the left ear, while the right side responded normally. This condition cleared of itself after fourteen days.

Hugo Frey (*Jour. of Laryngology,* March, 1913, p. 218) has collected 60 authentic cases of cochlear or vestibular nerve involvement in the early secondary stage of syphilis where no salvarsan had been given.

In this connection it is of interest to note (*Archiv,* 84, 3, p. 186) cases reported by Frey, Ruttin, Neumann, Kauffman, and Politzer, where a somewhat parallel train of symptoms in paralysis of the facial, cochlear, vestibular, and trigeminus nerves, could be laid to a rheumatic origin.

The conclusions which these different authors come to may be referred to. All agree that the

danger of otitic involvement following the use of salvarsan in a syphilitic having normal ears or some middle-ear trouble, is too small to enter into consideration, though some recommend warning the patient of the remote possibility. Knick advises caution where there may be a tendency to internal-ear trouble: as in those addicted to the excessive use of alcohol and tobacco, or those whose occupations give such a tendency (as in boiler-makers). It is where there has been or is present an internal-ear disorder of possible specific origin that one must be on his guard. For such Alexander recommends that caution be exercised in using "606" in acute or chronic cases of syphilitic involvement of the auditory nerve, whether from a residuary, an old latent, or a hereditary form of syphilis. He makes no exception for acute cases but does permit of exception in chronic forms as follows:—the injection can be used with safety in a chronic syphilitic disease of the auditory nerve when there is only a slight impairment of hearing; or in a case of chronic labyrinthine vertigo; or in a case having labyrinthine disease of specific origin which is not acute.

An aid to the diagnosis of salvarsan deafness is given by Alexander (*Archiv*, Dec., 1912, p. 9) in the galvanic acoustic reaction. This is positive in salvarsan deafness and negative in luetic deafness.

THE LABYRINTH.

As would be expected, recent otological literature deals more extensively with internal ear conditions than with any other phase. The experiments and tests first conducted by Barany have been productive of keen rivalry and extreme endeavor in investigation in the new field thus opened up, and as a result of this work, it occupies a very prominent part in the discussions. This research has been carried further in Europe, being especially aided by the microscopical pathology being done and by the clinical facilities at their disposal, but otologists on this side have been able to contribute much to our advancing knowledge. In America Braun and Friesner have written a book on "The Labyrinth" which brings into more accessible form the recent data; Newhart has translated Ruttin's book including a valuable number of case-records; Kerrison and Phillips and Kopetsky and Ballinger and other writers have included chapters on the labyrinth in their later editions;—so that we have access in book form to the most recent conclusions relative to labyrinthine disease and treatment. In general the simplification of the tests and a better understanding of their application has brought the consideration of labyrinthine conditions within the range of every otologist and its study has escaped the field of the theoretical to come under the observation of all. The first wave of operative enthusiasm has given way to a more conservative and careful estimation of conditions with a resultant selecting of cases and an improvement in the results. With this added familiarity, not only are we finding that the radical exenteration of the labyrinth is very rarely indicated and any opening of the internal ear should be undertaken with due hesitation as creating a possible infective channel to the meninges; but we are explaining many heretofore blind cases of deafness, and approaching their treatment in a more logical and efficient manner.

Histology.—In his studies on the histology of the internal-ear, Shambaugh has carried us ahead of our previous knowledge and has firmly established in theory at least that the tectorial membrane and not the membrana basilaris receives the sound impulses and imparts them to the hair-cells of the organ of Corti. He further finds the mechanism of the vestibule very similar to that in the cochlea and favors that school which holds that the vestibule also plays a part in the reception of sound waves.

Reaction Tests.—Of the different tests for labyrinthine reactions, the caloric and the rotatory have proved the most satisfactory. Friesner-Braun (*The Labyrinth*, pp. 120-122) point out that the caloric can be utilized also as a selective test, whereas it was thought that reliance for such would have to be put onto the rotatory. The head is placed in Brünings' so-called "oblique optimum" position (the head tilted 60° backward and 45° toward the examined side). Cold syringing in this position reaches the external semi-circular canal at its highest possible point and by condensation of the fluid establishes a fluid-flow downwards away from the vestibule, causing a lateral nystagmus to the opposite side if the canal is functionating. "If there is a positive reaction there is no need of carrying the test further as an isolated labyrinthitis in the vertical canals is practically unknown." If the reaction is negative, the external canals are considered diseased. If now, the head be rotated forward on the median axis 90°, to 30° from the horizontal (the pessimum position), the vertical canal on that side is brought into the vertical plane and the external thrown into the horizontal. If a rotatory nystagmus now develops, it is from the irritation to the vertical canals and we can conclude that they are functionating, the disease being limited to the external canals. This method being more simple lends itself well to cases where the patient is too weak to permit of the rotation tests, or is where the specialist has not access to a rotatory chair and apparatus.

We have an ingenious and simple table offered by James Adams (*Jour. of Laryng.*, Dec., 1910, p. 630) which may be of aid to some. Taking first the caloric test he notates hot water as +, cold as —; right ear +, left ear —; head erect +, inverted —; nystagmus (quick movement) to right +, to left—. This gives his first table.

TABLE I.—CALORIC TEST.

Ear.	Head.	Water.	Nystagmus.
+	+	+	+
+	+	—	—
—	+	+	—
—	+	—	+

That is: taking the first line we have, if the right ear be irrigated with the head erect and hot water be used there will be a nystagmus to the right. The changing of one to minus necessitates the changing of another to balance it.

In the rotation test he calls clockwise rotation (to the right) +, and counter-clockwise —.

TABLE II.—ROTATION TEST.

Rotation.	Nystagmus.	Ear.	Fall.
+	—	—	+
—	+	+	—

In the fistula test he calls compression plus, aspiration minus.

TABLE III.—FISTULA TEST.

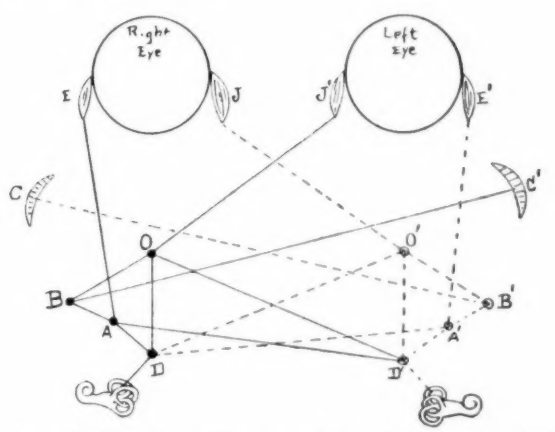
Ear.	Pressure.	Nystagmus.
+	+	+
+	—	—
—	+	—
—	—	+

or compression of the right ear gives nystagmus to right and so on.

The galvanic reaction requires a special outfit and is not as well accredited as the others. Barany (*Jour. of Laryng.*, Sept., 1910, p. 473) finds it an unreliable reaction because the current can reach the nerve trunk and elicit a nystagmus even after a labyrinth is destroyed. The most complete article on Electro-Diagnosis in Diseases of the Labyrinth found by the writers is by E. Junca of Bordeaux and is to be found in an abridged translation by Darling (*Jour. of Laryng.*, Jan., 1913). The reader is referred to it for a careful description of the technic. This author feels that no labyrinthine examination is complete without this test. Braun-Friesner devote a section to the technic. Hubby (*Annals of Otol.*, Sept., 1913, p. 638) discusses the method.

Nor is the fistula test found to be as reliable as was at first supposed. The most usual reaction is a nystagmus or movement toward the tested ear in case of compression, in the opposite direction in case of aspiration. The easiest technic is slow steady compression on a Politzer bag with its tip inserted into the auditory canal, remembering that there is danger of disturbing the structures in the oval or round windows if too much pressure be exerted. Alexander (*Archiv*, 84, 2, p. 140) found that in rare cases the so-called fistula symptom of this test can be gained without the presence of a labyrinthine fistula and with only a suppurative otitis media present. Ruttin (*Archiv*, Oct., 1913, p. 241) on the other hand finds that tuberculous forms are likely to give inverted or atypical reactions. He accounts for this by the fact that a tuberculous process may necrose into the canal at almost any point, while the ordinary suppurative or cholesteatomatous form shows its opening fairly constantly at the summit of the canal. He (*Archiv*, 84, 3, p. 182) reports a case of fistula of the vertical semicircular canal. Here compression gave a slow movement of the eye upwards, and aspiration gave a slow movement downwards.

Nerve Tracts.—In differential diagnosis and symptomatology several most instructive papers are found. Urbantschitsch (*Jour. of Laryng.*, Aug. 1910, p. 440) discusses in the anatomy three main routes between the labyrinth and the cerebrospinal system through its nervous connection with Deiter's nucleus: (1) the vestibulo-nuclear, through the posterior longitudinal bundle to the oculo-motor nucleus; (2) the vestibulo-cerebellar, through the restiform body to the cerebellum; (3) the vestibulo-spinal, by virture of fibres which communicate with the ventral horns of the spinal cord. Barany's chart (*Jour. of Laryng.*, 27, 5, p. 282) gives a diagram of these tracts which simplifies the tracing of the paths concerned.



The continuous line denotes the paths by which impulses travel and movements are affected on the right side, and their connections with the labyrinth on the left side; and the dotted lines are similar routes and connections on the left side.

E and *E'*—right and left musculus rectus externus. *J* and *J'*—right and left musculus internus. *O* and *O'*—right and left oculo-motor nucleus. *A* and *A'*—right and left abducens nucleus. *B* and *B'*—right and left centre for eye movements. *C* and *C'*—right and left cortex. *D* and *D'*—right and left Deiter's nucleus. *L* and *L'*—right and left labyrinth.

Barany (*Jour. of Laryng.*, Sept., 1910, p. 437), Bruce and Fraser (*Jour. of Laryng.*, Aug., 1910, p. 394), and Neumann (*Jour. of Laryng.*, Sept., 1910, p. 451) discuss the differential diagnosis and treatment of internal ear conditions, and W. Hmaack (*Archiv*, 84, 3, p. 163) goes into a rather elaborate discussion of labyrinthine meningitis, its diagnosis and treatment.

NON-SUPPURATIVE LABYRINTHITIS.

An experimental labyrinthitis has been produced by Grünberg (*Archiv*, 84, 2) and by Stenger (*Jour. of Laryng.*, Feb., 1911 p. 110). The former used the Bezold-Edelmann whistles, a^3 and a^4, full blasts being blown into the ear

for seven and for fourteen consecutive days, several times a day. Post-mortem examination showed a degenerative atrophy of the papilla acoustica. Stenger used rats, striking them repeatedly on the head to gain concussion results in the labyrinth. Microscopical examination showed him the different points of hemorrhagic exudation occasioned. Walter A. Wells (*Laryngoscope*, Oct., 1913, p. 989) gives the results of careful experiments, to learn the influence of sounds of different pitch, duration, and intensity, in the production of auditory fatigue. He considers that much of the fatigue is due to nerve tire; that the upper tone scale tires first, next the lower, and last the middle; but that some is due to muscle tire, that the higher pitched the sound the more does the tensor tympani muscle show a reflex contraction.

In trying to learn the relationship of the labyrinth to sea-sickness, Barany (*Jour. of Laryng.*, Mar., 1911, p. 157) tried a few experiments on himself. While riding on a scenic railway he experienced a sense of vertigo which he found he could obviate by holding his head downwards and forwards. From this he deduced that the utricule and saccule are the centres concerned with the movement of the body in straight lines, and that these are affected in sea-sickness. In contra-distinction to this view Neumann and Ruttin reported experiments they had conducted while crossing the ocean. When sea-sick they tried to overcome vestibular symptoms by using galvanism in opposition to the apparent direction of these symptoms; but without avail. Then they tried Bier's constriction about the neck. This too failed and seemed to prove that the trouble was not due to cerebral anemia. The condition was the same whether standing or lying down; and they concluded that the vestibule played a second part, the trouble being due to an irritation of the vagus. In this view Politzer concurred.

SUPPURATIVE LABYRINTHITIS.

Avenue and Nature of Infection. Max Görke (*Jour. Laryng.*, Aug., 1911, p. 398) points out that the connection from the meninges to the labyrinth is much more direct than from the middle ear to the labyrinth; hence meningitis is more likely to cause labyrinthitis than is an otitis media: in an estimated proportion of 15 to 50 of the former to one of the latter. If the infection travels from within it may come by the internal auditory meatus or by the acqueductus cochleae. Infection may enter from the tympanum through the tympanic wall or fenestra, or by induced or collateral edema, or by the blood vessels. Entrance is much more frequent in chronic forms and of these tuberculosis ranks as the most frequent cause and cholestetome second.

Harris (*Annals of Otol.*, Sept., 1913, p. 876) cites Manasse's case and pathological findings where sudden deafness came in a scarlet fever otitis caused by a perforation in the round window; which raises the question whether more cases are due to this cause than have been supposed. Siebenmann claims the usual mode of entrance of a tubercular infection to be through the oval or round window.

Indications for Operation.—Our knowledge of this condition has not yet reached the stage where definite rules can be laid down as to when to operate. Neumann (*Jour. of Laryng.*, Sept., 1910, p. 451) advances rules for our guidance, and Shambaugh (*Annals of Otol.*, June, 1913, p. 303) summarizes his opinion as follows: "The cases where a labyrinth operation seems to be clearly called for include: (1) Cases of labyrinth suppuration where clinical symptoms exist suggesting a beginning intracranial complication, such as altered cerebro-spinal fluid, severe unilateral headache, etc. (2) Cases where the labyrinth empyema develops as a part of a violent acute panotitis, where the indications for a mastoid operation exist. (3) Cases where the labyrinth suppuration develops as a sequel to chronic purulent otitis media, where well-recognized indications for a radical mastoid exist. (4) Cases where the labyrinth suppuration is complicated by erosion of the labyrinth capsule, by fistula formation into the labyrinth, by facial paralysis, or by sequestration of a part or the whole of the labyrinth capsule."

Many authors do not feel that they can go as far as this. They find that if they wait until an intra-cranial complication gives evidence of the need of a labyrinth operation, it is then too late to gain anything by operative interference; while if they open up wide a labyrinth in a case where the meninges have not yet become affected they may precipitate a meningitis. Uffenorde (*Archiv*, 93, Heft 1-2, p. 76) recommends the labyrinthine operation in: (1) All cases of labyrinthine suppuration with endocranial complication of labyrinthine origin. (2) All cases where cholesteatome has entered the labyrinth. (3) All cases where pus under pressure comes out of a fistula. (4) Tuberculosis of the labyrinth. Alexander (*Archiv*, 84, 3, p. 178) does not open the labyrinth in suppurative forms unless he suspects pus in danger of extending to the brain. All agree that extreme care must be exercised and that a conservative consideration of operative interference is to be recommended. A radical mastoid operation and then a waiting policy is advised by Politzer. The majority do not favor the following up of a fistulous tract. In Siebenmann's clinic where many tuberculous forms are found, a conservative procedure such as the enlarging of the oval window is recommended.

Operative Methods.—Two main schools are to be distinguished in the method of operation urged; the one advocating a less radical procedure where the vestibule is to be entered as by the Jansen method, the other urging that the entire labyrinth be removed clear back to the lip of the internal auditory meatus as in the

Neumann method. Alexander (*Jour. of Laryng.*, Sept. 1910, p. 451) gives some excellent rules to guide one and Braun-Friesner in their book show illustrations. The Richards method as described by its author is entered and has met with approval as being a happy medium between the two extremes. Dench (*Laryngoscope*, Aug., 1913, p. 814) feels that with the perfecting of technic and a more acurate knowledge of the anatomy, together with a more intelligent selection of cases, we will be justified in drawing finer distinctions and operating more radically. He even prophecies an opening of a non-suppurative labyrinth as a possible operation of the future, as a remedy for an increasing labyrinthine deafness. Politzer (*Archiv von Ohrenheilkunde*, Band 85, Heft 3, p. 155) gives his findings in 18 cases where microscopical examinations were made. His thoughtful consideration of the advisability of operative interference and of the methods to be employed recommends a careful reading. The study of the illustrations to be found in the text-books becomes a necessary adjunct to the ready appreciation of the different operative methods.

The Results.—These are very varied as is to be expected. Many unfortunate results have rather tended to cool the initial ardor, but out of this is coming a more rational consideration and a more useful application of this operative remedy. E. Ruttin (*Archiv*, 84, 3, p. 178) reports a singular case where an opening of the labyrinth revealed a complete ossification of the entire labyrinth. Some report an improvement in the hearing with an opening of the semi-circular canals. A further experience in this work will alone yield us a reliable opinion as to the place labyrinthine surgery should take in otology.

DEAF-MUTISM.

With the advance along other lines we find a parallel investigation into the field of deaf-mutism. Otologists are appreciating more and more the incurable nature of certain forms of this condition on the one hand; and that many cases are consigned to this class on the other, which do not rightly belong there. There is a more earnest endeavor in the education of these cases when young. Hudson Makuen (*Laryngoscope*, Feb., 1913, p. 116) says it is at the early imitative age that the child not only can learn lip-reading better, but it is at this same age that he has the ability to learn a correct speech which if not acquired then, appears never to be mastered. He recommends that general directions be given the mother and that the child's instruction begin at the earliest possible age.

In his search for the etiology of this condition, Urbantschitsch (*Jour. of Laryng.*, Dec., 1910) classifies deaf-mutism into two forms, the acquired and the congenital, the former of which may originate in either intra- or post-uterine life, and includes the various manifestations of hereditary lues. One hundred and twenty-five deaf-mutes as well as some of their relatives, were examined by the Wassermann test and 86.4% of these gave a negative or weak reaction, 6.4% gave a partial reaction, and 7.8% gave a complete or almost complete reaction. Sakutaro Kano (*Archiv*, 84, 2, p. 146) investigated the condition of the internal-ear in 75 deaf-mutes: 33 were born so, 36 acquired it, and 6 had severe deafness of a more recent origin. Total deafness was more frequent than partial. Spontaneous nystagmus was present in 20%; complete inactivity to labyrinthine irritation was present in seven cases. The turning tests were found more reliable than the caloric; and the static function was found less often destroyed than the auditory.

A marked similarity in the pathology of the internal-ear in deaf-mutes and that in cretins is noted by Otto Mayer (*Archiv*, 83, 3 and 4). After an exhaustive description of several cases and a careful study of the histological findings, he concludes that deaf-mutism and cretinism may be analogous. He judges many forms of deaf-mutism to be endemic; and thinks these endemic cases are merely mild forms of which the more advanced types show distinct cretinism symptoms. Certain forms of idiocy and of goitre also seem to be closely allied.

E. Urbantschitsch (*Archiv*, 84, 1) tested 101 deaf-mute children for their ability to localize the tone when a testing fork was applied to the skull; 18 cases could not locate the sound but heard it throughout the head; 9 did not hear anything; 10 heard the sound at the place of application only; 10 perceived the sound as being always to one and the same side; 15 perceived it always in the nearest ear; 39 had a crossed perception, hearing it in the opposite ear.

Deaf-mutism and Eugenics.—The study of deaf-mutism can be best conducted on a larger scale than the individual observation of one man will ordinarily afford. For this we are receiving aid from an unexpected quarter, viz: the National Bureau for the Promotion of the Deaf, founded in London by Mr. Leo Bonn and richly endowed with his money and his enthusiasm. Prominent on this committee is Macleod Yearsley, otologist to the London County Council Deaf Schools;—and a leader in the work has been Dr. Kerr Love of Glasgow who read a paper before the bureau in 1913, published by it under the title of "Causes and Prevention of Deafness," which promises to be monumental as a scientific investigation of our hitherto "hopelessly deaf."

Dr. Love demonstrates the existence of three distinct types of so-called congenital deafness.

1. Early deafness, involving a consequent mutism, which is purely somatic, local, acquired, traumatic, not inherited, and not transmissible, Its commonest causes are neglected cases of measles and scarlet fever.

2. Deafness due to syphilis: a racial poison,

amenable to treatment, and not a distinctly inherited deafness excepting as it affects the offspring through racial poison. "Hosts of these cases could be saved if we knew that they were syphilitic, identified them early, and treated them with salvarsan."

3. Mendelian or genetic deafness (as Prof. Saleeby calls it in his just published book on "The Progress of Eugenics"), which Dr. Love demonstrates for the first time. He found that after the first two forms had been eliminated, there were many families where deafness descended from generation to generation. "We may suspect that some form of racial poisoning was the originating factor in these cases. But that is beside the point, which is that this Mendelian deafness exists and behaves as such." For this reason Prof. Saleeby does not argue against the marriage of this type which may be considered as the pure deaf-mute, but does recommend against their bearing children. Even though one parent be a "pure normal, the other as "an impure dominant" can be the means of the birth of a deaf-mute. This as coming from perhaps the leading authority on eugenics becomes a most interesting conclusion to otologists.

Book Reviews.

Diseases of Infancy and Childhood. Their Dietetic, Hygienic and Medical Treatment. A text-book designed for practitioners and students in medicine. By LOUIS FISCHER, M.D., Attending Physician to the Willard Parker and Riverside Hospitals of New York City, Attending Pediatrist to the Sydenham Hospital, Former Instructor in Diseases of Children at the New York Post-Graduate Medical School and Hospital, etc., etc., Fellow of the New York Academy of Medicine. Fifth edition. With 301 illustrations, several in color, and 43 full-page half-tone and color plates. Philadelphia: F. A. Davis Company. English Depot: Stanley Phillips, London. 1914.

In spite of the author's statement in the preface that this book has been practically rewritten and each chapter carefully revised, this edition is little, if any more satisfactory than those which have preceded it. It is superficial and in many instances the point of view is that of some years ago rather than that of the present day. Much space is given to comparatively unimportant subjects and other very important ones receive only passing notice. The best articles are those on intubation and the exanthemata. Methods of treatment are described in considerable detail and on this account the book should be of value both to the student and to the general practitioner. As a whole, nevertheless, the standard of the book is not up to that of several others by American authors which cover the same field. It is a reflection on the discrimination of the medical profession of this country that a book of this grade should reach a fifth edition in seven years when books like Holt's "Diseases of Infancy and Childhood" and Rachford's "Diseases of Children" are obtainable.

General Paresis. By PROF. EMIL KRAEPELIN of Munich. Authorized English translation by J. W. MOORE, M.D., New York. The Journal of Nervous and Mental Disease Publishing Co. 1913.

This volume supplies a distinct want. Since the work of Mickle of nearly thirty years ago, no authoritative and adequate English work on this important disease has appeared. In this translation of the chapter on General Paresis of Kraepelin's classic Text-Book of Psychiatry we have the best exposition of the subject in our language if not in any tongue. The author's luminous style is well preserved in the translation and there is no detail of the subject that escapes thorough consideration, if we except the presence of the spirochete in the brains of paretics, which had not been demonstrated when the chapter was written, and the intraspinous treatment by salvarsanized serum, the efficacy of which remains to be proved. With these exceptions the exposition of the subject is well up to date. A number of the recent experimental methods of treatment by Erlich, Alt, Fischer, Wagner and others receive discriminating attention and much practical and valuable advice for meeting the various symptoms and emergencies is given. The author is skeptical of the value of mercurial treatment in the developed disease, and concludes that for the present one should be content with potassium iodide. The chapters on etiology and diagnosis are equally suggestive and illuminating. As a whole, although the two hundred pages are only a portion of a greater work, they form a treatise in itself and one which every psychiatrist and neurologist will welcome. The cheap paper covers are a decided blemish on a sample of book-making which is otherwise excellent.

State Board of Health of New Jersey. Patterson, N. J.: State Printers. 1914.

This volume contains the thirty-seventh annual report of the Board of Health of the State of New Jersey and the report of the Bureau of Vital Statistics for the year ended Oct. 31, 1913. It consists of the material and data usual in such reports, and shows that in 1912 the state death-rate was only 14, the lowest in its history, and the birth-rate 22.3, the highest since 1879.

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THE NEW HAVEN HOSPITAL AND THE APPOINTMENT OF DR. SIMON F. COX.

THE gradual change which has taken place in hospital management and particularly the more intimate relation which is being established between hospitals and medical schools is exemplified by the recent action of the New Haven Hospital. On condition that Yale University would raise a large amount of money for new buildings and endowment, it was agreed that the New Haven Hospital would be taken over by the University and used in connection with its Medical School as a University Hospital. It is understood that the hospital is to be entirely under the control of the Medical School and the services of the appointees are to be continuous after the plan adopted by most of the Boston institutions from the example set by the Johns Hopkins Hospital and others. In addition to the present hospital at New Haven, a fund approximately of three quarters of a million dollars is to be devoted to the construction of a special hospital for tuberculosis to be situated in the outskirts of the city on a tract of land which will form a part of the general hospital plan and will be administered by its superintendent.

We have, in a previous issue, noted the fact that Dr. Simon F. Cox has been appointed to the responsible position of superintendent of the enlarged institution. Dr. Cox is peculiarly fitted both by training and temperament for the development of the large work which lies before him. He was graduated from the Harvard Medical School in 1900, and after serving as house officer at the Long Island Hospital, Boston Harbor, went to the Deer Island Hospital as assistant resident physician, from which, at the expiration of six months, he was transferred to the Board of Health Hospital, Quarantine Service, and placed in charge of the smallpox hospital at Gallup's Island, during the epidemic of smallpox which was then prevailing and in the investigation of which he rendered valuable service. Later he became acting superintendent of the Long Island Hospital for eighteen months, and in June, 1906, undertook the superintendency of the Albany (N. Y.) City Hospital. After about a year's service he returned in July, 1907, to Boston as superintendent of the newly organized Boston Consumptives' Hospital, a position which he held up to the time of his appointment to the New Haven institution.

From the foregoing statement it will not be questioned that Dr. Cox has had an unusual training for the work which he is about to undertake. The position is a peculiarly important one in that it establishes in somewhat revolutionary manner an entirely new scheme of administration in an old, well-established and respected institution which has always been recognized as a hospital of high standing. The responsibility of such pioneer work as will undoubtedly fall to Dr. Cox is manifestly very great and will require not only initiative but unusual executive capacity to carry the plan to successful accomplishment. We have confidence that he will meet these responsibilities in the same spirit and with the same effectiveness that has characterized his work in the various other capacities in which he has served.

AMERICAN RED CROSS AND HOSPITAL RELIEF WORK IN EUROPE.

THE American hospital relief ship *Red Cross*, which reached Rotterdam, Holland, on Oct. 6, landed at that port an expedition consisting of six surgeons and twenty-five nurses, who, on Oct. 7, started by train for their respective destinations in Austria and Germany, one unit being assigned to each country. The two units

last week landed in France have been stationed at Mont-de-Marsan.

The total amount of contributions made to the Red Cross fund on peace Sunday, Oct. 4, in various churches throughout the United States is only $5661. Inclusive of this amount, the total of the New York fund on Oct. 10 was $225,187, and on Oct. 9 the total of the American Ambulance Hospital (Neuilly) fund reached $69,931. Considerable sums have also been raised for the Belgian Relief Fund and for the Prince of Wales national relief fund.

Apparently the American Ambulance Hospital at Neuilly (Paris) is winning golden opinions for efficiency from those who have come in contact with its work. Sir Frederick Treves, Bart., sergeant-surgeon to King George, returned on Sept. 30 from Paris to London, and in a recent issue of the *British Medical Journal* describes his observation of the principal military hospitals in and about the French capital.

"The Military General Hospital is taking from 500 to 600 cases. It is at the Trianon Palace Hotel, Versailles. The large rooms on the ground floor, the dining room, drawing room and reading room make magnificent wards, and are filled with private soldiers. All the patients are very comfortable. In the grounds of the hospital are two marquées for medical cases, but the patients are few, because the health of the troops at the front is excellent.

"A second hospital is the American at the Lycée Pasteur at Neuilly. The number of beds is 300. There were 370 patients there, of whom 162 were British. The Americans have reason to be proud of this hospital, which is the best of its type in Paris. The staff consists of 15 doctors, 75 fully trained nurses, and others, making a total of 180.

"A third hospital is the Astoria Hotel, which has been taken over by the British Red Cross Society. It will accommodate 300 cases, and is being gradually equipped. There are 65 patients at present, all except three being British.

"Other hospitals are at Claridge's Hotel, the Majestic Hotel, two large private houses, the Lycée Bouffon and smaller institutions.

"The great difficulty in the medical aspect of the war is the question of transport. More ambulance trains are being provided, but they will not be immune from the risk of being delayed at sidings. The great need of this campaign is for motor ambulances. The American Hospital has 20, and in this fleet of cars rests largely the secret of its success.

"The British Red Cross Society is putting 200 motor ambulances into France at the earliest moment. Five hundred would not be too many. A motor ambulance can come down from the front in a little over two hours, whereas a train may take 10 or even 20 hours."

Another observer, writing from Paris, describes as follows the field work of the American Ambulance Hospital corps:—

"Attached to the hospital is a squadron of automobile ambulances, 10 of which were presented by the manufacturers and 10 purchased. Their chassis have been covered with khaki hoods and fitted to carry two wounded men and attendants.

"On their runs they are accompanied by automobiles with medical supplies, tires and gasoline. The ambulances scout at the rear of the battle line and carry back those whom the field hospitals cannot handle.

"The other day I watched orderlies who accompany these ambulances handling about 40 English wounded, transferring them from the automobiles to the reception hall, and the smartness and intelligence with which the members of each crew worked together was like that of a champion polo team."

Equally favorable opinions have been expressed by Sir Frederick Treves and others of the efficiency of the American Women's War Relief Hospital at Torquay, England, where the Massachusetts Red Cross unit has been stationed.

Report from the European continent on Sept. 26 states that Dr. August Bier, professor of surgery at the University of Berlin, is surgeon-in-chief of the German army, and that Freiherr von Eiselsberg, professor of surgery at the University of Vienna, is surgeon-in-chief of the Austrian army.

SIXTY-EIGHTH ANNIVERSARY OF ETHER DAY.

THE annual observance of Ether Day on October 16, at the Massachusetts General Hospital, appropriately recalls each year a momentous event in the history of medicine and of the human race. This year, the sixty-eighth anniversary will be celebrated in customary manner. During the forenoon there will be demonstrations and operations, a program of which will be found on the last page of this issue of the JOURNAL. The trustees of the hospital have invited the members of the House Pupils' Alumni Association to a luncheon at the hospital from 12.30 to 1.30 P.M. In the afternoon the commemorative exercises will be held at 4 o'clock in the lower out-patient amphitheatre, with presentation of diplomas to graduating house officers. The principal address will be by Dr. John M. T. Finney, of the Johns

Hopkins Medical School, Baltimore, and will be published in full in a later issue of the JOURNAL. In the evening the ninth annual meeting and dinner of the Alumni Association will be held at Hôtel Vendôme. Thus the day's celebration affords not only pleasant occasion for reunion among the hospital alumni, but opportunity for serious review of medical and surgical progress since the great event in the world's history which the observance commemorates.

MEDICAL NOTES.

BUBONIC PLAGUE IN HONG KONG.—Report from Hong Kong, China, states that during the fortnight ended Sept. 19, seven new cases and seven deaths of bubonic plague occurred in that city.

BUBONIC PLAGUE IN NEW ORLEANS.—Report from New Orleans states that on Oct. 4 another death from bubonic plague occurred in that city, making the tenth since the outbreak of the disease on June 27.

PREVALENCE OF INSANITY IN IRELAND.—The recently published sixty-third annual report of the inspectors of lunatics in Ireland shows an increase in the total number of insane in institutions in that country from 24,839 in 1912 to 25,009 in 1913.

"These figures do not include insane wandering at large or residing in private dwellings, with a few specified exceptions. The increase in number, 170, is less by 100 than the average annual increase for the preceding ten years. It is unsatisfactory to note that the number of insane in workhouses has not decreased during the year, although 641 patients were transferred from workhouses to district asylums. The inspectors have undertaken an elaborate analysis of the age-distribution of the insane during the past 50 years, and they conclude that mental abnormality is becoming less among the young, while the number of mentally afflicted among the aged has more than doubled in the period under review. These facts support the suggestion of the influence of the former larger population, and, it may be, of a legacy of mental weaknesses dating from the sufferings of the famine years. A hope is held out that, as time goes on and these influences exhaust themselves, there may be seen, if not a diminution in the numbers of the insane, an arrest, or at least a greatly lessened velocity, of increase. The proportion of insane under care to the total population has increased from 250 per 100,000 in 1880, to 571 per 100,000 in 1913. The percentage of recoveries to admissions in 1913 was 39.2 being 1.1 lower than in the previous year. The general death-rate on the daily average number resident was 7.2%. Deaths from phthisis were frequent; only 79 deaths occurred from general paralysis of the insane, of which 45 were in the Dublin and Belfast asylums."

MEDICAL SOCIETY OF THE MISSOURI VALLEY.—The annual meeting of this society was held in Colfax Springs, Iowa, September 17-19, with an attendance of 150. An excellent program of twenty-one papers was disposed of in two days, the third day being devoted to clinics in the hospitals of Des Moines. The invited guests included Dr. Robert H. Babcock of Chicago, who made an excellent evening address, taking for his subject the various forms of streptococcus endocarditis, with specimens; Dr. J. P. Sedgwick, of Minneapolis, who gave a practical demonstration of the great importance of the x-ray in diagnosing diseases of childhood; Dr. Campbell P. Howard, of Iowa City, who presented an able paper on the diagnosis of mediastinal tumors. All were thoroughly enjoyed by those present.

The society adopted a resolution endorsing the Harrison anti-narcotic bill pending in U. S. Congress.

The following officers were elected for the ensuing year: President, Granville N. Ryan, Des Moines; first vice-president, J. C. Waterman, Burke, S. D.; second vice-president, A. E. King, Blockton, Ia.; treasurer, O. C. Gebhart, St. Joseph (re-elected); secretary, Charles Wood Fassett, St. Joseph (re-elected.)

The next meeting will be held in Omaha, Neb., the fourth Thursday and Friday in March, 1915.

THE NIBERI PRIZE.—The Niberi prize, equivalent to $4,000, is offered as usual by the Turin Royal Academy of Medicine for scientific medical research. The conditions may be learned by written application to the secretary of the Academy, 18 Vie Po, Turin, Italy.

THE CHADWICK GOLD MEDALS.—It is announced that at the close of the current year the Chadwick trustees will award a Chadwick gold medal and £50 each to the naval and military medical officer who shall have rendered most distinguished service in promoting the health of men in the British army and navy.

INFANT DEATH-RATE IN BURMA.—In Burma during the year 1913, 316,654 children were born and 107,967 under five years of age died.

"In view of this alarmingly high infant mortality a memorial bearing the signature of a large number of European and Burmese ladies has been forwarded to the Lieutenant-Governor praying that (1) the cadre of the Government Medical Department be amended by opening 21 of the appointments of assistant surgeons (25 being vacant on April 1st) to lady doctors; such women of this province as are already qualified and suitable it is suggested should be employed in some of the 21 towns now without female

medical aid, the remaining vacancies to be filled in the same way as speedily as possible; (2) separate wards for maternity cases be provided in all government hospitals where such wards do not now exist; and (3) all town authorities in large towns be urged to entertain visiting midwives."

STUDY OF INFANT MORTALITY IN BROCKTON BY UNITED STATES CHILDREN'S BUREAU.—Following its investigation of causes of infant mortality in Johnstown, Pa., and Manchester, N. H., the United States Children's Bureau has announced its purpose of making a similar study at Brockton, Mass. In this announcement, the bureau makes the following statement of its origin and aims:—

"The Children's Bureau was created by Congress about two years ago, to study all matters pertaining to the welfare of children and child life. For the first time, therefore, we have an organization fitted to study this complex social problem of infant mortality which, for many years, has been challening the attention of the civilized world.

"This study, now in progress, will touch a number of conditions which may seem to the uninitiated rather superfluous. Such is not the case, however, any more than the details necessary to the physician, the sanitarian, the chemist, or any other scientist in their research work are superfluous. Those who have already spent many years studying the problem of infant mortality know that figures on one or two of the factors entering into the high death-rate of infants are of no material value in the search for hidden causes of something. What is needed are figures on all the factors and on a sufficient number of cases so as to point the way unmistakably to certain things. By this study upon which the Children's Bureau is embarking we shall get enough facts in various parts of the United States so that it will be possible to consider the high infant mortality rate from all points of view.

"One of the great questions for which we are seeking a definite answer is: How far do home conditions (using that term in the broadest sense) determine the factors of health and development of the child? We want to know how children live as well as why they die. We want to get at the conditions surrounding all phases of infant life.

"Stillbirths are only one of the many phases of infant mortality, and it must be borne in mind that the United States Children's Bureau is not concerned in bringing to light any criminal case. Deliberate destruction of life is a matter for the grand jury and not for us. Neither are we taking any side in the question of responsibility for such death.

"The Children's Bureau has already completed its study of this subject in Johnstown, Pa., a city with a high infant death-rate, where the manufacture of steel and to a certain degree coal mining employ a large part of the male population, while most of the women remain at home. Manchester, N. H., was selected as the second city on account of the high rate of infant mortality and because nearly 50% of the women over 14 years of age, are employed outside of the home, nearly three-fourths of these women being employed in cotton mills.

"The Children's Bureau bespeaks the good will of the people of Brockton in the government's effort to learn how to save babies' lives. The government must have the help of the mothers of the country in this effort and upon that we confidently depend."

Brockton, it should be added, has been selected for study because of its high birth-rate, low rate of infant mortality, and the completeness of its vital statistics.

BOSTON AND NEW ENGLAND.

HARVARD MEDICAL SCHOOL.—The Harvard Medical School opened on Sept. 29 with an enrolment of 324 students, an increase of 40 over last year, and the largest number since the establishment of the new entrance requirements in 1902.

A NEW MATERNITY HOSPITAL FOR BOSTON.—At the opening of the Boston University School of Medicine on Oct. 1, announcement was made of an anonymous gift of $100,000 to the Massachusetts Homeopathic Hospital for the erection of a new maternity building at the corner of Harrison Avenue and Stoughton Street.

"This gift permits the fulfilment of plans which have been progressing for 20 years. A foundation already has been laid and a one-story building erected, which has been in use as a dispensary. To this building three and possibly four stories will be added. The use of the first floor as a dispensary will be continued.

The hospital will be under the control of the trustees of the Massachusetts Homeopathic Hospital, but by a working arrangement with the trustees of Boston University the medical staff of the hospital is largely made up of members of the faculty of the Boston University School of Medicine.

"The property consists of 10,597 square feet of land and a brick building, assessed at $76,000, of which $16,000 is on the land. It adjoins the Massachusetts Homeopathic Nurses' Home and is on the opposite corner from the property of the Home for Destitute Catholic Children. Below it on the opposite side of Stoughton Street are the Boston University School of Medicine and the Massachusetts Homeopathic Hospital."

POSTPONEMENT OF CONTAGIOUS HOSPITAL PLANS.—Owing to the present high cost of construction, the contemplated erection of a new

building at the Boston City Hospital for contagious diseases has been indefinitely postponed, and the evacuated West Roxbury parental school will be used for this purpose. This will make possible the sale of the present Southampton Street Hospital and the Dorchester Convalescent Hospital, and the devotion of the proceeds to extension and improvement of the buildings at West Roxbury.

Two Centenarians.—Amelia J. Lavin, who died on Oct. 6 at East Boston, is said to have been born in 1813 at Bay Fortune, P. E. I. She migrated in 1864 to Massachusetts, where she lived a widow for many years. She is survived by two aged sons.

Mrs. Solomon Hartford, who died on Sept. 25 at Rochester, Strafford county, N. H., is said to have been born in that town in February, 1812. She married in 1830, and had been a widow since 1872. She is survived by two elderly sons and two aged sisters. Longevity has long been habitual in her family.

Summer Work of Milk and Baby Hygiene Association.—The Boston Milk and Baby Hygiene Association has recently issued a report of its work during the past summer:—

"During June, July, August and September, 1914, the Association cared for 2556 babies registered at its 12 milk stations, compared with 2185 in 11 stations during the summer of 1913, and 1767 in nine stations in the summer of 1912. New admissions increased from 714 during the summer of 1912 to 1045 during 1913, and 1116 during this summer.

"During the period under consideration in 1912, 29 babies became so acutely ill that they died while registered with the milk stations. Last year, in spite of the much greater registration, only 16 babies died while under care; this summer only 15.

"The total attendance at these summer clinics shows the most surprising improvement. In 1912 the total attendance was 4361; in 1913, 5793; this summer it has risen to 8124."

Report of the Boston City Hospital for Its Fiftieth Year. — The recently published fiftieth annual report of the trustees of the Boston City Hospital, with the report of the superintendent, records the work and progress of that institution and its various departments during the year ended Jan. 3, 1914.

"During the year 13,419 patients were treated in the wards, 47,385 as out-patients, 397 at the Convalescent Home, 2751 at the South Department; at the Haymarket Square Relief Station 1252 were treated in the wards and 38,465 as out-patients; and at the East Boston Relief Station 258 were treated in the wards and 12,802 as out-patients—a total of 116,729 who have received the benefits of the hospital in all departments.

"The maximum number of patients in the hospital proper on any one day was 674, as against 651 in the previous year. The minimum number was 412, in comparison with 449 for the previous year.

"During the year 16,198 persons applied for admission at the main hospital. Of this number 12,834 were admitted and 3364 were rejected, the latter being 482 more than last year. There were 206 applicants rejected for want of vacant beds, but of these 31 were admitted later. There were 907 of these applicants who could be treated more properly in the various out-patient services without the additional cost of receiving them in the wards. Admission was denied to 617 for lack of information that they were suitable cases; of these, 206 were received within three days after application and 10 were admitted later; and 451 were rejected as apparently incurable or unsuitable for treatment here.

"The entire expenditures for all departments of the hospital for maintenance during the fiscal year were $616,301.02. Of the amount spent for maintenance, $408,503.47 was expended upon the hospital proper, $24,733.76 on account of the 10 out-patient departments, $117,845.20 on account of the South Department, $38,220.27 on account of the Haymarket Square Relief Station, $17,154.72 on account of the East Boston Relief Station, $9,834.60 for the Convalescent Home.

"This sum was expended for 41,488 weeks' board of patients, at a cost per capita of $12.67, but if we deduct the money collected from paying patients, interest on trust funds and other income, the net cost to the city per capita per week was $9.95. The cost of subsistence supplies was $150,819.66; the total weeks' board for an average of 1399 persons was $72,972.

"The work of the South Department has grown considerably. There were 2403 patients admitted to the department in 1913, which is 470 more than were received the previous year. The demand for room exceeded the supply.

"The expenditure for running this department amounted to $117,854.20. This sum was expended upon 2751 patients and divided by 13,350 weeks' board gives $8.85 as the per capita cost per week. The cost of subsistence supplies was $32,508.57.

"During the 19 years that the department has been in operation, 45,651 patients have been received, nearly all ill with an infectious disease. A study of vaccines for whooping cough is being made and it is hoped that an antitoxin for this disease may be discovered.

"In the department for vaccine serum therapy, 3250 visits were made during the year. There were 3047 inoculations. In the out-patient department there were 47,383 patients treated and there were 140,385 visits made during the year. At the Haymarket Relief Station, 39,717 patients were treated during the year, making a total of 415,095 treated during the last 12 years."

CASES OF INFECTIOUS DISEASES reported to the Boston Board of Health for the week ending Oct. 6, 1914: Diphtheria, 50, of which 3 were non-residents; scarlatina, 35, of which 7 were non-residents; typhoid fever, 20, of which 1 was non-resident; measles, 13, of which 13 were non-residents; tuberculosis, 55, of which 3 were non-residents. The death-rate of the reported deaths for the week was 13.40.

NEW YORK.

"SAFETY FIRST."—The fact that the "safety first" campaign of the New York Central lines has resulted in a reduction of fatalities during the year ending June 30 of 39 employees and 58 trespassers, as compared with the previous years, shows that its managers have worked to some purpose. This great railway system, on which no passenger has been killed, since February, 1911, has in one year reduced by 102, or 30%, the deaths of employees, licensees and trespassers along its ways and at crossings. The managers have now taken advantage of this good showing, and the means by which it was brought about, by having prepared the films of a picture play which is staged in a New York Central car for exhibition to its employees and their wives and children. They furnish a timely warning in an impressive way, and it is stated that the Lackawanna, the Santa Fé, and other railroads will soon reproduce them for their own employees.

WORK OF QUARANTINE DEPARTMENT.—Health Officer of the Port has made a report to Governor Glynn in which it is shown that during the year ending Sept. 30 the usual annual deficit in his department was cut almost in half, and the opinion is expressed that the work at Quarantine will soon be placed on a self-supporting basis. During the year no case of quarantinable disease was permitted to gain admission to the city of New York, and the new laboratory, one of the most completely equipped in the world, was installed. The completion of this building not only strengthens the protective efficiency of the quarantine department, but affords opportunity to the state for research work of the most valuable character. The cost of construction and equipment, with surrounding improvements, is placed at $91,000. Dr. Oscar Teague of Cornell University Medical College has been appointed chief of the laboratory staff, to succeed the late Dr. E. C. Baldwin.

AN EPIDEMIC OF TYPHOID FEVER.—The State Health Department reports the occurrence of an epidemic of typhoid fever during the past summer at Waterloo, Seneca County, as worthy of note in affording an apt illustration of the manner in which a serious disease may be spread through carelessness or lack of knowledge of some of the fundamental principles of hygiene and sanitation. An investigation directed suspicion toward a certain well situated at a point where a citizen maintained a public hitching shed, and it was found that the typhoid sufferers had all drunk the water from this well. In the latter part of April a lavatory had been placed in an adjoining building, with a six-inch drain running from it, within two feet of the wall, to a sewer. The tile was laid in cement, and was tight with the exception that at the point where it passed the well an opening into the drain had been made to carry off the surface water and the surplus water pumped from the well. Although the upper portion of the well was protected for a distance of two or three feet by a cement wall, the opening made in the drain was in such a position that a large amount of surface water and water pumped from the well might back up in the flow in the well-drain and cause it to go backward through the soil into the well. Samples of the water from the well obtained on the day of inspection showed the presence of organisms indicating a high degree of fecal contamination.

STATE PUBLIC HEALTH COUNCIL.—Dr. Wilhelm Gaertner of Buffalo has been appointed a member of the State Public Health Council, to fill the vacancy caused by the resignation of Dr. Edward Clark, who has been made a state sanitary supervisor. Six trained nurses who were appointed from the list of those who passed the civil service examination for the position of supervising nurse, held in June, have been assigned for the time being to the division of child hygiene, to help in the infant welfare campaign organized for the county fairs, and to follow up the work accomplished during the summer by the child welfare exhibits.

ADDITION TO WOMAN'S HOSPITAL.—Plans have just been filed for an addition, costing $110,000, to the Woman's Hospital, on Cathedral Parkway (110th Street). The new building will have a frontage of 55 feet on 109th Street, and is to be known as the Thompson Pathological Building. It will be six stories in height, with an operating theatre on the top floor.

COLUMBIA UNIVERSITY.—The official registration figures, given out after the monthly meeting of the trustees on Oct. 5, show that the net total of students at Columbia University, is 12,509, which is stated to be the largest number at any university in the world. This registration does not include the new students whose names will be enrolled in February. Gifts to the amount of $40,195 were announced by the trustees. The largest of these was one of $20,000 from Professor and Mrs. Frederick S. Lee, to constitute a permanent fund, the income of which is to be used for research work in the department of physiology. Among the other gifts were the following: $2,500 from Clarance Mackay, for the Surgical Research Fund; $2,000 from Professor and Mrs. Lee, for the use of the department of

physiology; $2,000 from an anonymous donor, as a contribution to the Frank Hartley Scholarship Fund in the College of Physicians and Surgeons; and $1,360 from an anonymous donor, for the use of the department of pharmacology. The following changes in the teaching staff of the medical department were announced: Dr. C. G. Coakley has been appointed professor of laryngology to succeed the late Dr. W. K. Simpson; Dr. H. F. Swift, associate professor of the practice of medicine, to succeed Dr. W. T. Longcope, promoted, and Dr. A. M. Pappenheimer, assistant professor of pathology, to succeed Dr. J. W. Jobling, who has been made professor of pathology in Vanderbilt University. Assistant Dr. A. M. Miller, assistant professor of anatomy, has resigned to accept the professorship of anatomy in the Long Island College Hospital.

A Centenarian.—Mrs. John Harris, who died on Oct. 6 at Long Island City, N. Y., is said to have been born in 1808. She had been active and apparently in good health until within a few hours of her death. She is survived by one aged son.

Mortality for Week Ending October 3, 1914.—The mortality for the week just passed is the lowest record in the history of the city, and it is the second time this year that the weekly death-rate per 1000 of the population has gone below 11; the other occasion upon which the death-rate descended below this figure was during the week of July 4, 1914. The rate during the past week was 10.58 per 1000, which was 1.54 points lower than the rate during the corresponding week of 1913, this lowering of the rate being equivalent to a decrease of 163 deaths. The mortality from the different causes of death show a decrease practically down the line.

All the infectious diseases, without exception, showed a considerably decreased mortality, this being especially true of the number of deaths reported from diphtheria and croup, typhoid fever, diarrheal diseases and pneumonia. The mortality from organic heart and kidney diseases also showed a considerable decrease. The one cause of death that showed an increase was that of pulmonary tuberculosis, and this increase, taking the increase in the population into consideration, was equivalent to one of three deaths.

Viewed from the point of age grouping there was a tremendous decrease in the mortality of infants under one year of age, a considerable decrease between one and five years; the decrease at five years and over was less marked than at the earlier periods of life.

The death-rate for the first forty weeks of the year 1914 was 13.81 per 1000 of the population as compared with a rate of 14.09 during the corresponding period in 1913, a decrease of .28 of a point.

Massachusetts Medical Society

Notice.—Secretaries of District Medical Societies are requested to send notices of coming meetings of their societies to the office of the Boston Medical and Surgical Journal, 101 Tremont Street, Boston, addressed to the Editor, at least two weeks before the date of any given meeting, so that they may appear in the Journal in proper time. Secretaries are urged also to send in reports of the meetings, giving time and place of meeting, whether a quarterly or monthly meeting, the names of the officers, the number present, the titles of the papers and the names and addresses of the readers and of the discussers. Brief abstracts of the papers and of the discussions will be appreciated.

Current Literature

Medical Record.

September 26, 1914.

1. Jordan, A. C. *Chronic Intestinal Stasis.*
2. *Four Clinical Lectures—Held at the New York Polyclinic Medical School and Hospital During the Week of the Meeting of the International Surgical Congress:*
   a. Wyeth, J. A. *Fractures and Burns.*
   b. Bodine, J. A. *Operations for Inguinal Hernia Under Local Anesthesia.*
   c. Lyle, A. *Fractures.*
   d. Bainbridge, W. S. *Cancer.*
3. Crowell, A. J., and Munroe, J. P. *Salvarsan in the Treatment of Syphilis—With Special Reference to the Use of Salvarsanized Serum in Cases of Syphilis of the Central Nervous System.*
4. *Stone, W. J. *Comparative Wassermann, Cobra and Globulin Tests in Syphilis—With a Report of One Hundred and Five Reactions.*
5. Jacoby, A. *Backache and Posterior Parametritis.*
6. Abrams, A. *Abrams' Method of Treatment in Aneurysms.*

4. Stone compared the Wassermann, cobra and globulin tests in a large number of cases of syphilis. In 30 normals and controls the Wassermann and cobra tests were negative and in 6 of these the globulin test was negative in the spinal fluid. In 90 other normals and controls the cobra test was negative. In 22 cases of secondary syphilis the Wassermann and cobra tests were positive; in 5 of these the globulin test was positive in the spinal fluid and in 7 in the blood serum. In 7 cases of active late syphilis the cobra test was positive in the blood serum and the globulin test positive in both blood serum and spinal fluid. In 24 cases of late and clinically cured syphilis the Wassermann and cobra tests were both negative. In one case of cerebral syphilis the Wassermann and cobra tests were negative, the globulin positive. [L. D. C.]

New York Medical Journal.

September 26, 1914.

1. Fordyce, J. A. *Modern Diagnostic Methods in Syphilis.*
2. Wilcox, R. W. *The Medical Treatment of Intestinal Stasis.*

3. MITCHELL, H. W. *General Paralysis of the Insane.*
4. STANTON, E. M. *The Prognosis in Acute Appendicitis.*
5. MAYS, T. J. *The Consumption Crusade: A Parallel.*
6. MANION, R. J. *Some European Clinics.*
7. *RONGY, A. J., AND ARLUCK, S. S. *The Use of Scopolamine-Morphine in Labor.*
8. LEVIN, I. *The Value of the Abderhalden Test for Cancer.*
9. KINGSLEY, C. R., JR. *Artificial Pneumothorax in Pulmonary Tuberculosis.*
10. KNAPP, M. I. *Newer Teachings Concerning Diseases of the Gastrointestinal Tract.*

7. Rongy and Arluck report encouraging results with scopolamine-morphine in 100 cases of labor. [L. D. C.]

ANNALS OF SURGERY.

SEPTEMBER, 1914.

1. ROGERS, J. *The Course of Acquired Disease of the Thyroid Gland and the Principles Which Seem to Control Its Progress.*
2. *MACKINNEY, W. H. *How Shall the Clinician Interpret the Wassermann Reaction?*
3. *THOMAS, B. A., AND PANCOAST, H. K. *Observations on the Pathology, Diagnosis and Treatment of Seminal Vesiculitis.*
4. *UHLE, A. A. *The Treatment of Bladder Papilloma by High Frequency Destruction.*
5. RANDALL, A. *Clinical Manifestations of Polyps of the Male Urethra.*
6. ARCHIBALD, E. *A Method of Treating Adherent Perforating Ulcer of the Posterior Wall and Lesser Curvature of the Stomach.*
7. WALTON, A. J. *Congenital Pyloric Stenoses.*
8. TIRUMURTI, T. S. *Diffuse Lymphangio-Endotheliomatous Growths of the Peritoneum.*
9. *TENNEY, B. *Tumor at the Meatus Urinarius in the Female.*
10. NEUHOF, H. *Traumatic Intra-acetabular Separation of the Pelvic Bones (Epiphyseal Diastasis in the Acetabulum).*
11. *MAYO, C. H. *The Preparation of Dry Bony Areas for Skin Grafting.*
12. COLLINS, A. N. *Thumb Forceps to Facilitate Anastomosis.*

2. MacKinney has never found a positive Wassermann reaction in primary syphilis earlier than the fifth day, but has never failed to find a positive reaction after the 15th day. Confirmation of the clinical diagnosis should, therefore, be by demonstration of the spirocheta in smears. The Wassermann should be used for prognosis in this stage of the disease. In clinically doubtful manifestations of secondary cutaneous syphilis, he maintains that the clinician is justified in rejecting a positive test in favor of his clinical experience until by the subsequent course of a case he proves that syphilis does or does not exist. The possibility of a latent coexisting syphilis must always be thought of. In active tertiary syphilis the reaction usually confirms the clinical picture. The chief rôle of the test in this stage is as index to treatment. In his experience after two or three years of mercurial treatment the reaction is still present in 50% of cases. The clinician should never rely upon the Wassermann reaction absolutely in diagnosis.

3. Thomas and Pancoast have been impressed with the frequency of involvement of the seminal vesicles in cases of posterior urethritis. The source of certain infective, cryptogenic, nervous and arthritic conditions is in a large percentage of cases the chronically diseased seminal vesicle. The work of Fuller, of Lloyd and of Picker is referred to. The infection is usually of mixed type. The gonococcus, streptococci, pneumococci, staphylococci, colon bacilli, coryza bacteria and the tubercle bacillus have been demonstrated. Perivesicular infiltrations about base of bladder and prostate and extending through perirectal tissues are common. Massage will effect a cure in the majority of cases, but obviously, if the ejaculatory duct is completely stenosed, it will be futile. Fuller's vesiculotomy has a definite indication in a certain percentage of cases. The authors, however, prefer Voelcker's method. Vesiculectomy is to be reserved for grave chronic cases and for tuberculous infection. Needle puncture of the vas and the injection of collargol is not only of therapeutic value but of diagnostic value. Ten radiograms accompany the article. These demonstrate intimate relationship to ureter, strictures, partial obstructions and loculated collections of pus or pyovesiculosis.

4. Uhle presents epitomes of histories of eight cases treated by high frequency destruction. The technic is described. In small growths destruction with one treatment has been attempted. In large growths several treatments have been necessary. As a general rule treatment should not be given oftener than once a week depending on the size and density of the growth and local reaction. Uhle regards the method as very effective. Immediate effects (diminution in size and hematuria) are good, but cure is not to be expected.

9. Tenney presents an interesting case and then reviews the literature. The conditions considered are papillary angioma of the urethra (150 cases), prolapse of vesical dilation of the ureter (9 cases), prolapse of bladder tumor (1 case), prolapse of urethra, prolapse of bladder mucosa and prolapse of bladder wall. The symptoms, physical characteristics, and incidence of these conditions is summarized

11. Mayo presents a method to encourage speedy granulation of denuded bone surfaces, due either to accident or to result of operation. This consists of drilling bone down to blood supply (diploe in case of skull). The drill holes are placed about one-fourth inch apart. Granulations rapidly appear, furnishing excellent blood supply for skin grafts. [T. W. H.]

JOURNAL OF MEDICAL RESEARCH.

SEPTEMBER, 1914.

1. *CUSHING. *Studies on Cerebro-Spinal Fuid. Introduction.*
2. WERD. *The Theories of Drainage of Cerebro-Spinal Fluid with an Analysis of the Methods of Investigation.*
3. *WERD. *The Pathways of Escape from the Subarachnoid Spaces with Particular Reference to the Arachnoid Villi.*
4. *WERD. *The Dual Source of Cerebro-Spinal Fluid.*
5. WEGEFARTH. *The Drainage of Intra-Ocular Fluids.*
6. WEGEFARTH. *The Establishment of Drainage of Intraocular and Intracranial Fluids Into the Venous System.*
7. *WEGEFARTH AND WERD. *The Analogous Processes of the Cerebral and Ocular Fluids.*

1. Cushing points out that little if any absolute knowledge has existed as to the origin, function and subsequent drainage of the cerebro-spinal fluid.

3. The chief channel of return of cerebro-spinal fluid to the general circulation lies in the arachnoid villi, to a very minor degree through the lymphatic system. No evidence of escape through the cerebral veins and capillaries could be found.

4. Cerebro-spinal fluid appears to be derived from the choroid plexuses in the cerebral ventricles and from the perivascular systems of the nervous tissues.

7. There exists a close relationship between the cerebral and ocular fluids. Apparently they are derived from similar sources and escape in correspondingly similar ways. Both perform the same supportive and eliminative duties. They correspond pathologically as well as physiologically. [L. H. S.]

JOURNAL OF INFECTIOUS DISEASES.

SEPTEMBER, 1914.

1. *DEWITT AND SHERMAN. *Tuberculocidal Action of Certain Chemical Disinfectants.*
2. HASLEM AND FRANKLIN. *The Standardization of Anti-Hog-Cholera Serum.*
3. FITZGERALD. *A Biometrical Study of the Mucous Capsulatus Group.*
4. HEKTOEN. *The Formation of Antibodies in Rats Fed on Pure Vegetable Proteins.*
5. *SHARP. *The Bacteriology of Vaginitis.*
6. HOLMAN. *The Relative Longevity of Different Streptococci and Possible Errors in the Isolation and Differentiation of Streptococci.*
7. *CRABTREE. *Observation on the Growth of the Gonococcus and the Staphylococcus Albus from the Urethra in Plate Culture (A Criticism of Warden's Work).*
8. KITE. *Some Structural Transformations of the Blood Cells of Vertebrates.*
9. WHERRY AND LAMB. *Infection of Man with Bacterium Tularense.*
10. LAVINDER AND FRANCIS.. *The Etiology of Dengue. An Attempt to Produce the Disease in the Rhesus Monkey by the Inoculation of Defibrinated Blood.*
11. GOOD AND SMITH. *The Bacillus Abortionis Equinus as an Etiological Factor in Infectious Arthritis in Colts.*
12. TUNNICLIFF. *An Anaerobic Vibrio Isolated from a Case of Acute Bronchitis.*
13. TUNNICLIFF. *A Pleomorphic Branching Organism Isolated from a Case of Chronic Rhinitis.*
14. KENDALL AND SIMONDS. *The Extrinsic Activity of Plain and Broth Cultures of the Typhoid Bacillus.*
15. JONES. *The Bacteriological and Chemical Evidence of the Occurrence of a Hexose Sugar in Normal Milk.*
16. *IRONS. *The Treatment of Tetanus by Antitetanic Serum.*
17. *DAVIS. *The Growth and Viability of Streptococci of Bovine and Human Origin in Milk and Milk Products.*
18. *LECOUNT AND JACKSON. *The Renal Changes in Rabbits Inoculated with Streptococci.*
19. SCHOFIELD. *The Etiology of Pyemic Arthritis in Foals.*

1. Phenol in 5% and even 1% solution, formaldehyd in 1% to 0.01% and ethyl alcohol in 25% solutions were found to have distinct germicidal action upon the tubercle bacillus in from one to twenty-four hours. Of the metallic salts, $HgCl_2$, $AgNO_3$ and $AnCl_3$ were found the most powerful. The tubercle bacillus is less resistant than the streptococcus, staphylococcus, pneumococcus, the bacillus typhosus and the bacillus coli. The fat content does not determine the resistance of the tubercle bacillus to disinfectants, since the fat solvents were of far less value as disinfectants than the substances insoluble in fats.

5. Sharp considers the gonococcus cutaneous test and the complement-fixation reaction to be of little service in the diagnosis of late gonorrheal vaginitis and as methods of controlling treatment of apparently cured cases. Both of these tests depend upon the presence of a higher grade of immunity than is found in chronic vaginitis. Somewhere gonococci may be still present in the vaginal discharge. The smear method is also of limited value, since the gonococcus is so frequently overgrown by other organisms comparatively early in the disease process. Cultural isolation of the gonococcus proved the most satisfactory method of obtaining during the late stages of a chronic vaginitis a knowledge of the etiological factor and an idea as to the progress of the disease.

7. Crabtree is unable to substantiate the findings of Warden in regard to the etiology of acute urethritis. The claims of Warden were briefly as follows: that the staphylococcus albus—called provisionally the staphylococcus urethrae—when suspended in serum, hydrocele fluid, ascitic fluid, weak pancreatic solution and gonococcus autolysate loses the power of retaining Gram's stain; that intracellular diplococci in gonorrheal pus are probably Gram-negative staphylococci in diplococcal form; and that during the first few hours of its life upon ordinary culture media the staphylococcus albus is a Gram-negative organism. Crabtree shows that the staining property of the staphylococcus albus is due to an artefact in the form of an albuminous coating of the organism or the colony, which renders decolorization easy or the fixation of the primary stain impossible. This is demonstrated by staining of colonies in situ and by the transfer of the apparently Gram-negative albus to salt solution. From this he concludes that the staphylococcus albus has no stage of growth in which it is a consistent Gram-negative organism. Hence Warden's statement that acute urethritis is caused by the staphylococcus urethrae, not by the gonococcus, based as it is upon the foregoing pieces of evidence, is fallacious.

16. Irons shows a considerable decrease in mortality from tetanus through the use of anti-tetanic serum. It is of course imperative to start such treatment at the earliest possible moment. He advises following the outline of Park, who recommends the intraspinious introduction of 3000 to 5000 units, together with an intravenous dose of 10,000 to 20,000 units. The intraspinous injection is repeated upon the following day. The blood remains strongly antitoxic for several days, so that a subcutaneous injection of 10,000 units is not required for four or five days. The danger from immediate anaphylactic shock from the use of the serum is negligible, because of its rarity and because of the high mortality of untreated tetanus.

17. Milk souring inhibits the growth of hemolytic streptococci. The acid production in old milk and butter is fatal to the life of this organism. In ice-cream the hemolytic streptococcus remains viable for long periods of time, hence it is a most suitable medium for the transmission and preservation of dangerous streptococci.

18. LeCount and Jackson have produced in rabbits by injections of streptococci lesions of subacute nephritis similar to those found in acute infection in man complicated by or due to streptococcus infection. Such complications were found in fewer instances in those animals treated with anti-streptococcus serum or vaccine. [L. H. S.]

Miscellany.

RABIES AND OTHER NOTIFIABLE DISEASES.

THE acting commissioner of health of Massachusetts, Dr. William C. Hanson, has recently sent to local boards of health in this commonwealth the following circular letters dealing with dog-bite, rabies, and other diseases dangerous to the public health. Especial attention is called to the amended list of notifiable diseases, to which have now been added dog-bite, dysentery, hookworm disease, infectious suppurative conjunctivitis, malaria, mumps, plague, and septic sore throat.

CIRCULAR LETTER UNDER DATE OF AUGUST 25.

DOG BITE AND RABIES.

"Dogs run about more freely during the summer months, hence the reason for the greatest

number of dog bites at this season of the year. Unless a dog is extremely violent it should not be killed, because if killed early in the course of rabies, microscopic examination of the dog's head may fail to show evidence of the disease. The physician will then be in doubt about giving the Pasteur treatment to the person bitten. Moreover, the person bitten suffers with unnecessary mental anxiety. First in importance, therefore, is to find and keep the dog under observation. If ten days elapse and no symptoms appear the Pasteur treatment is unnecessary. Wounds caused by the bite of a dog or other animal suspected of having rabies should at once be thoroughly cauterized with fuming nitric acid, preferably by means of a small glass rod or pipette.

"When a dog or other animal shows symptoms of rabies it should be chloroformed or shot. If shot, it should be done with a pistol and the bullet enter the forward part of the brain, or the heart; otherwise important regions for examination may be destroyed. The head should then be securely packed in sawdust and ice and shipped with all possible haste to a local laboratory for examination, or to the Bureau of Animal Industry, State House, Boston, Mass., and the said Bureau notified of such shipment. Avoid shipping so that the head will reach the State House on a Saturday afternoon or the afternoon before a holiday, but hold in cold storage. All cases of rabies are now required by law to be reported to the State Department of Health through the board of health of the city or town in which the case occurs, and every case of dog-bite should be so reported for investigation.

"If a dog or other animal shows suspicious symptoms of rabies, the fact should be reported immediately to the Bureau of Animal Industry so that an inspector of animals may be detailed to act promptly and effectively. Circulars containing a description of the symptoms of rabies may be had upon application to the city or town clerk, to whom such circulars are supplied by the State Department of Health, as required by Section 132 of Chapter 102 of the Revised Laws. Pasteur treatment is now administered in various parts of the State by physicians who are in the employ of the State Department of Health. The virus used is furnished by the Hygienic Laboratory of the United States Public Health Service and is administered in accordance with their stipulations."

CIRCULAR LETTER UNDER DATE OF SEPTEMBER 30.

"A circular was recently sent to you from the State Department of Health relative to dog-bite and rabies. I wish once more to call your attention to the necessity of starting anti-rabic treatment as soon as possible after the person is bitten. Persons bitten by animals suspected of having rabies should receive the anti-rabic treatment whether or not the suspicion is confirmed by microscopical examination of the brain of the animal, inasmuch as the Negri bodies, which are regarded as specific of the disease, are not always present, possibly because they have not developed to a demonstrable condition at the time the animal was killed.

"Should you have a person bitten by a dog, to whom the Pasteur treatment is to be given, notify promptly the office of the State Department of Health and immediate arrangements will be made for the administration of the virus by one of our State physicians. Both the virus and its administration are free of cost.

"The request in the circular that notice be given to the Department of Animal Industry of any animals showing signs suspicious of rabies is not intended as a substitute for the requirement of Section 5, Chapter 608, of the Acts of 1912, which reads:—

> "The board of health of a city or town, any member or agent thereof, or any other person who has knowledge of or reason to suspect the existence of any contagious disease among any domestic animals in this commonwealth, or that any domestic animal is affected with such contagious disease, whether such knowledge is obtained by personal examination or otherwise, shall immediately give notice thereof in writing to the commissioner of animal industry, or to an inspector of animals for the city or town where the animal is kept.

"It would be well for your Board to request that reports be made to the local inspector of animals as well as to the Department of Animal Industry. It is hoped that with such notification, both to the local inspector and to the commissioner of animal industry, prompt, efficient and coöperative measures may be carried out in dealing with the animal in question."

DISEASES DANGEROUS TO THE PUBLIC HEALTH.

"The following is an amended list of diseases declared by the State Department of Health to be reportable under the provisions of Sections 49, 50 and 52 of Chapter 75 of the Revised Laws, as amended by Chapter 480 of the Acts of 1907. Householders and physicians must now give immediate notice, the latter in writing over their own signatures, to the local board of health of all cases of:—Atinomycosis, anterior poliomyelitis, anthrax, Asiatic cholera, chicken pox, diphtheria, dog-bite (requiring anti-rabic treatment), dysentery (*a*, amebic, *b*, bacillary), epidemic cerebro-spinal meningitis, German measles, glanders, hookworm disease, infectious diseases of the eye (*a*, ophthalmia neonatorum, *b*, suppurative conjunctivitis, *c*, trachoma), leprosy, malaria, measles, mumps, pellagra, plague, rabies, scarlet fever, septic sore throat, smallpox, tetanus, trichinosis, tuberculosis (all forms), typhoid fever, typhus fever, whooping cough, yellow fever.

"Cases of the above diseases must be reported

by the local board of health, *with the names and addresses of the patients,* to the State Department of Health within twenty-four hours."

MEDICAL PARIS A CENTURY AGO.

In the issue of the *British Medical Journal* for May 9, 1914, was an article on "Medical Paris in the Spring of 1814." The stirring events which have arisen in the great European war now in progress add a new and peculiar interest to these lines, written in a time of apparently unclouded peace just a century after the facts they chronicle, just a few weeks before Paris was to become again a centre of intense military and political activity.

"During the early months of 1814, when Britain was lying bound in the icy fetters of the 'Great Frost,' and when rigorous conditions were not lacking on the Continent of Europe, the eyes of the world, or of that part of it which took interest in the doings of the great Napoleon, were centred upon Paris. The fighting around that city, boasting herself to be the "Athens of Europe," and even, with a larger purview, "Capital of the Universe," had for weeks ebbed and flowed; but the Allies, with difficulty succeeding in keeping in more or less perfect alliance, gradually began to close in, and after a confused welter of marchings and counter-marchings, advances and retreats, of battles won, lost, or drawn, and of parleyings and negotiatings, Blücher and Schwartzenberg arrived on March 30, and the Battle of Paris was fought, with the result that on the following day (March 31) the Emperor Alexander of Russia and the King of Prussia made their entry into the city on the Seine. The Emperor Napoleon was some five and thirty miles away at Fontainebleau, and although in these masterly defensive campaigns of 1814 he had worked wonders, 'boy-conscripts' notwithstanding, it was a changed France since the days of the Moscow disaster and the battle of Leipzig; there was no longer the great enthusiasm for the Emperor, and there were not wanting sighs for a Republic once again. Consequently it was in sullen tranquillity that the vast crowd of Parisians watched the long procession of the foreign troops tramp along their streets; 'a few shouts saluted the noble presence of the Tsar,'[1] and a small group of aristocrats in the Boulevard des Italients called out loudly, *'Vivent les Bourbons!'* The Tsar was quite willing that the Bourbons should live (if they would let live), and with Talleyrand, capable of shining 'in a crisis or at a congress,' to help him, and the Senate in a state of easy pliancy, it was soon *un fait accompli.* Napoleon said to those sent to tell him, 'Very good, gentlemen, since it must be so, I abdicate'; he would have taken back his words a few minutes later—threw himself on a sofa, and called out, 'Nonsense, let us march to-morrow, we shall beat them'—but his marshals bore him down. The Bourbons were to live again—on the throne of France—for a time! In the meantime it was, as Tacitus[2] said about another crisis, rather a cessation of war than a beginning of peace.

There were medical men living in Paris during these exciting times; in the early months of 1814 they were visiting their patients, going their rounds in the hospitals, operating when occasion arose, debating in their learned societies, and writing articles for their great *Dictionnaire des sciences médicales;* but are they all inarticulate now, and do they speak to us in no manner of way out of the past? Fortunately there are whispers that come even from that confused city, so that we need not be ignorant of what our medical *confrères* did and said, and even of how they felt, as they looked out on the Tsar and the Russians, Austrians, and Prussians tramping along, and the agitation to restore the Bourbons began to gather force. Very interesting some of these whispers are, especially those that come to us in the *Souvenirs*[3] of a young doctor who was working away in the Hôtel-Dieu in that troublous and particularly surgical time, when convoys of wounded were arriving almost daily. Docteur Poumiès de la Siboutie was the name of the young medical man from Périgord, who kept a diary of events in these years, and who a long time afterwards, during a period of enforced inactivity—from an accident to his knee—got out his old journal and wrote his recollections.

"He was not a duly qualified practitioner in 1814, but he became one in the following year, when his city was again in the occupation of the Allies; so that it was as a medical student that he witnessed the events of the months marked by the 'First Abdication.' He and the Revolution saw the light in the same year (1789); by birth he belonged to the *bourgeoisie,* and his native place was Saint Germain-du-Salembre in Périgord. He went to Paris in 1810 to study for the medical profession; it had been settled that he should be a solicitor, but after a year of trying he found he hated the law. His mother had inspired him with a great love for natural history, and this formed one of the attractions of medicine, but he had always thought the life of the doctor an enviable one. Doctors were rare in country districts, their place being taken by the *officiers de santé,* men with a secondary qualification, and not rejoicing in the M.D. The real doctors were highly respected and well paid. So Poumiès de la Siboutie set off for Paris (1810), walking nearly all the way, in much the same fashion as Thomas Carlyle had traversed the hundred miles between Ecclefechan and Edinburgh just a year

[1] *Cambridge Modern History,* vol. ix, p. 555, 1906.

[2] Bellum magis desierat quam pax coeperat. Tacitus, *Hist.,* Book iv, 1.

[3] *Souvenirs d'un médecin de Paris.* Dr. Poumiés de la Siboutie, 1789-1863. Publiés par Mmes. A. Branche et L. Dagoury ses Filles. Paris: Plon. 1910.

before (1809), for *bourgeoisie* students had no money to spare for coaches in those days. After some adventures of a mildly exciting kind he arrived at his destination. 'Here was I at length in Paris, the city of the young provincial's dreams! The first impression was disappointing, . . . the streets were narrow and muddy, many were unpaved, . . . the population of 600,000 was poorly clad, . . . there were very few sewers.' He betook himself to the Military College to see his brother, and thereafter found lodgings in the Rue de la Harpe, right in the centre of the famous student world of the Quartier Latin. He was a needy student; he had to care for each coin, and, like many others who have had to struggle with such difficulties, he distinguished himself above the crowd.

"Some incidents and observations made during these early undergraduate years are of interest. A characteristic of the period was the large number of cripples and hunchbacks among the students. Here was the dysgenic effect of war in evidence; the flower of the young men of the nation were marching to Spain, to Austria, and to Russia, and the weak and sickly were entering the professions and were to be the fathers of the future. Poumiès began to study anatomy in November, 1810, and after a bit became engrossed in it; but physiology he worked at with enthusiasm; 'everything is grand and marvellous in this science.' Dissecting seems to have been carried out very much as it is today; four students sat at each table on which was one subject (obtained from the hospitals), and one of their number read directions from an anatomy work whilst the others prepared the portion. There was a man 'who brought up the bodies' in these times too; he laughed and sang cheerily over his work; but one day, as he was returning from the Bicêtre where he had been collecting material, he was struck down with apoplexy: his wife, who was with him, had him placed on the handbarrow brought him back to the theatre, and insisted upon the autopsy being performed. It is rather a gruesome tale.

"Poumiès de la Siboutie saw the last of the indigent students of medicine who were termed the *'majors.'* They had no means of subsistence, and were employed as barbers' assistants in hairdressers' shops; and they afterwards set up as barber-surgeons and often did very well. There was only one left in 1810. But space does not permit of further references to this early part of the young Périgord student's training; suffice it to say that he was appointed dresser on the staff of the Hôpital Saint-Louis in 1811, acted as assistant to Dr. Texier, of Versailles, in 1812 and was made hospital house-physician in the same year, went in this capacity to the Hospice de la Salpêtrière, entered the Pitié in January, 1814, and a month later reached the summit of his ambition, the vast hospital known as the Hôtel-Dieu. Before leaving this part of his life, however, it is necesssary to rescue for posterity the following tale about Alibert, the skin specialist, who was the chief physician at the Hôpital Saint-Louis:

"Among the patients waiting for him one day after his lecture was a poor devil with elephantiasis, a well marked and very characteristic case. 'Superb,' said Alibert. 'Can't it be cured, doctor?' 'I'll have you painted,' said Alibert. 'But, sir, can I hope to be cured?' 'Certainly, certainly, but I must have you painted,' 'Can I have a bed in your ward?' 'A bed, you should have ten beds if you wanted them.'

"Every dermatologist knows about Jean Louis Alibert—a third edition of his *Nouveaux élémens de thérapeutique* appeared in this very year, 1814—but all do not know what Sainte-Beuve[4] has preserved for us, namely, that Rivarol in 1788 gave Alibert first place in his *Petit Almanach de nos Grands Hommes.* Rivarol must have been in a sportive mood when he planned his Little Almanack of Great Men, for in it, as Sainte-Beuve says, 'all the ephemeral and imperceptible authors were arranged in alphabetical order, accompanied by an ironical eulogy'; 'he made war upon a wasp's nest and with great difficulty afterwards avoided thousands of stings.' It may be added that at that time (1788) Alibert was not, of course, known for his works on dermatalogy, but for a fable inserted in a collection of provincial Muses.

"To return to Poumiès de la Siboutie. He was at the Hôpital de la Pitié in January, 1814. This was the large hospital (716 beds) behind the Jardin des Plantes, which dated from 1612 but had recently (1792-1802) been rebuilt. Here the young Poumiès worked under Lerminier, who was medical adviser to Napoleon. Convoys of sick began to arrive from the seat of war, and the hospital was quickly overfilled. Here is the picture: 'The beds were partly stripped, only one mattress being left for each; straw was strewn in the corridors, in the halls, even in the church. The sick lay side by side; gaps made by death were filled by the next convoy.' Dr. Lerminier was evidently a man of resource. 'Now then, my boys,' he said to the sick soldiers, 'hurry up and get well; every one who wants to go home shall start as soon as he is able. Your people are waiting for you.' As Poumiès says: 'The words produced a magical effect. Sunken eyes shone again, dying men pulled themselves together, for there was as much home-sickness as typhus among them.'

"Poumiès de la Siboutie was house-physician at the Hôtel-Dieu with Lallemand (1790-1854) afterwards of Montpellier. He was an extraordinary fellow, a year younger than Siboutie. He was a glutton for work. 'His original education was *nil*, therefore he determined to acquire one.' He succeeded, too, being able in two years to read the classics in the original, and to produce a good translation of the Aphorisms of Hippocrates. He lay flat on the floor with a pipe in his mouth during his hours of study.

[4] C. A. Sainte-Beuve, *Causeries du Lundi*, vol. viii, p. 55.

In medical science he was one of the remarkable men of his day.

"Armand Trousseau, who afterwards did so much to make the Hôtel-Dieu famous on the medical side, was only 13 years old, and whilst 'le bonhomme' Pelletan, with elegant manners and social tact, was the nominal head of the surgical department, it was Dupuytren, the surgeon born, who was the real head. It was under Dupuytren that Poumiès de la Siboutie worked in these eventful months of 1814; but before passing from Pelletan it may be recalled that it was he along with Lassus who made the *post-mortem* examination upon the body of Louis XVII, and found the cause of death to be neglect or scrophulosis. Pelletan took the heart home with him, but it was stolen by his pupil, Tillos, and not returned till after his death in 1817, when it was entombed in St. Denis.[5]

Dupuytren lives again in the *Recollections* of de la Siboutie:

"He was absorbed by an enormous practice and had little time for reading. He was consequently accused of not keeping himself acquainted with the advances of science. I assert without fear of contradiction that for him this was not necessary. What he did not know he divined or imagined for himself. However serious or unusual the circumstances, his genius never failed him. Students from all parts of the world crowded at his hospital visits and at his clinical lectures. He spoke easily and well; he began in a low tone, but the buzz of the theatre ceased instantly and every one listened attentively; his lectures were full of matter. . . . In manner he was serious and rather stilted; he was not very easy to know and was more admired than loved by his colleagues. It used to be said that his every word, gesture, and movement were studied and that he was not expansive or spontaneous. All this was true, but among intimates he was simple, friendly, and genial.

"There were trying days during the occupation for all true Parisians. 'We were no longer masters in our own hospitals,' wrote de la Siboutie bitterly. 'It was hard to find ourselves in the power of our enemies. We blushed when first we saw these hideous Cossacks, Tartars, and Kalmucks galloping through our streets, crouching with their long heavy lances on their little horses, and at the sight of our own military posts occupied by men in strange uniforms, our bridges guarded by cannon.' This was in April; on May 3 Louis XVIII (who had been detained in England by an attack of the gout) made his formal entry into Paris."

[5] Baas's *History of Medicine*, Handerson's translation, p. 1032, 1889.

Correspondence.

VISITING LECTURER AT THE BRIGHAM HOSPITAL AND THE HARVARD MEDICAL SCHOOL.

Peter Bent Brigham Hospital.

Boston, October 8, 1914.

Mr. Editor: It may be of interest to readers of the Journal to know that Dr. Thomas Lewis of London, Assistant Physician and Lecturer on Cardiac Pathology at the University College Hospital and Editor of *Heart*, and probably the leader in the newer methods of studying cardiac function, will spend the week beginning October 25 at the Peter Bent Brigham Hospital as Visiting Physician, pro tem. to that institution. He will also act as Visiting Lecturer in Medicine at the Harvard Medical School.

While here he will conduct ward visits, clinics and other student exercises.

This is part of a plan for having prominent medical men as visiting lecturers at Harvard and temporarily in charge of the wards of the Brigham Hospital, a plan inaugurated last year by Dr. William S. Thayer of Baltimore.

Very truly yours,

Henry A. Christian, M.D.

APPOINTMENTS.

Tulane University.—*Dr. William H. Seemann* has been elected dean of the faculty of Tulane University School of Hygiene and Tropical Medicine, and the following appointments to the faculty have been made: *Dr. Abraham L. Metz*, professor of chemistry; *Dr. Andrew F. Fricdrichs*, professor of oral hygiene; *Dr. Isadore Dyer*, professor of skin diseases; *Dr. Edouard M. Dupaquier*, professor of tropical medicine and acute infectious diseases; *Dr. Charles C. Bass*, professor of experimental medicine and director of the laboratories of clinical medicine, and *Dr. Joseph D. Weis*, professor of tropical medicine.

University of Syracuse.—*Dr. Oliver Wendell Holmes Mitchell*, from the department of medicine of the University of Missouri, has been appointed professor of bacteriology, and has as his assistant *Mr. Ralph R. Simmons, A.M.*, also from the University of Missouri. *Dr. F. M. Meader*, associate professor of preventive medicine, has accepted the position as director of the division of communicable diseases in the New York State Department of Public Health. He has, however, retained his position as head of this department and there has been secured as his assistant *Dr. Edward D. Clark*, for the last three years connected with the health department of Buffalo. *Dr. Howard L. Van Winkle*, assistant in the Municipal Department of Public Health, has been made instructor in this department and will conduct the work in laboratory diagnosis in the municipal laboratories.

Foxboro State Hospital.—The Massachusetts executive council on Oct. 7 confirmed the recent appointment of *Dr. Albert C. Thomas*, of New Haven, Conn., as the new superintendent of the Foxboro State Hospital for the Insane. Dr. Thomas was for ten years assistant superintendent of the Connecticut State Hospital for the Insane at Middletown, and has been for several years serving as superintendent of the New Haven Hospital.

MASSACHUSETTS GENERAL HOSPITAL.

DEMONSTRATIONS IN THE SURGICAL AMPHITHEATRE.
"ETHER DAY"—OCTOBER 16, 1914

Physicians are cordially invited to attend. The demonstrations will be carried out on the time scheduled regardless of attendance.

1. Dr. R. C. Cabot, "Hospital Routine Investigation of Gastric Cases." 10 A.M.

2. Dr. Wyman Whittemore, "End Results in Cases of Empyema." 10.10 A.M.

3. Dr. H. C. Berger, "Anaphylaxis of Infants to Certain Proteids." 10.20 A.M.

4. Dr. Hugh Cabot, "Prophylactic Treatment of Bladder Tumors by High Frequency Current." 10.30 A.M.

5. Dr. H. P. Towle, "Heliotherapy in Skin Diseases." 10.40 A.M.

6. Dr. H. F. Hewes and Dr. D. F. Jones, "Ulcerative Colitis." 10.50 A.M.

7. Dr. D. L. Edsall, "Preventive Measures in Industrial Disorders." 11.05 A.M.

8. Dr. R. B. Osgood, "Prevention of Foot Strain in Nurses." 11.20 A.M.

9. Dr. C. Morton Smith, "Responsibility of the Medical Profession in Regard to Syphilis." 11.30 A.M.

10. Dr. C. L. Scudder, "General Principles of Open Treatment of Fractures" 11.40 A.M.

11. Dr. J. H. Means, "Basal Metabolism in Obesity and Other Conditions." 11.55 A.M.

12. Dr. C. A. Porter, "Demonstration of Surgical Cases." 12.05 P.M.

13. Dr. C. A. Leland, Jr., "Pulmonary Embolism." 12.20 P.M.

Operations by the Surgical and Special Services will be performed during the hours of 10.30 A.M. to 1 P.M., in the special operating rooms and will be announced in the Amphitheatre.

The Out-Patient Department, Pathological Laboratory, Zander Room and X-Ray Department will be open for inspection. An electrocardiograph will be demonstrated by Dr. Paul D. White in the basement fo Ward G.

SOCIETY NOTICES.

NEW YORK AND NEW ENGLAND ASSOCIATION OF RAILWAY SURGEONS.—The twenty-fourth annual session will be held at Hotel Astor, Broadway and 44th Street, New York City, Wednesday, October 21, 1914.

NEW ENGLAND PEDIATRIC SOCIETY.—The thirty-third meeting of the New England Pediatric Society will be held on Friday, October 23, 1914, at 8.15 P.M., at the Boston Medical Library. The following papers will be read:

1. "Megalocolon and Microcolon": with case reports. Dr. Langley Porter, San Francisco.

2. "The Differentiation of Human and Cow's Milk by Color Tests." Dr. Richard S. Eustis, Boston.

3. "Asthma in Children: Its Relation to Egg Poisoning." Dr. Fritz B. Talbot, Boston.

RECENT DEATHS.

DR. WILLIAM P. ADAMS, who died on Oct. 3 at Nashua, N. H., was born in 1854.

DR. LEMUEL BOLTON BANGS, prominent for many years as a genito-urinary surgeon in New York, died on October 4. Descended from colonial ancestry, he was born in New York City August 9, 1842. He was graduated from the College of Physicians and Surgeons in 1872 and afterwards served as interne at Bellevue Hospital, and in 1880 was appointed surgeon to Charity Hospital (now City Hospital) on Blackwell's Island. Five years later he was made surgeon to St. Luke's Hospital, and in 1898, professor of genito-urinary surgery in Bellevue Hospital Medical College. Dr. Bangs wrote much on his special branch of surgery, and was the author of a valued text-book. He was a charter member of the Medical Association of the Greater City of New York, and at the time of his death was consulting surgeon to St. Luke's, St. Vincent's, Bellevue and the City Hospitals, Manhattan, and the Methodist Episcopal (Seney) Hospital, Brooklyn.

DR. EDWIN O. PECK, who died recently at Morristown, N. J., was born in 1832 at Glens Falls, N. Y. He was a charter member of the New Jersey Dental Association. He is survived by his widow and three children.

DR. WILLIAM HENRY DOWNEY, a Fellow of The Massachusetts Medical Society, died at Taunton, Mass., Oct. 1, aged 46 years. He was a graduate of the Harvard Medical School in 1898, joined The Massachusetts Medical Society the following year and had practised in Peabody, Mass., until a year ago.

BOOKS AND PAMPHLETS RECEIVED.

The Relation of the Medical Profession to Accident Insurance, by W. Edward Magruder, M.D. Reprint.

Chronic Intestinal Stasis Surgically Considered, by William Seaman Bainbridge, M.D. Reprint.

Chronic Intestinal Stasis, by William Seaman Bainbridge, M.D. Reprint.

Ophthalmic Literature, July, 1914. Vol. iv. No. 7.

The Blood-Pressure Effects of the Application of Creatin to the Cerebral Cortex, by Robert Stanton Sherman. University of California Publication in Physiology. No. 19, Vol. 4.

Time and Thomas Waring, A Study of a Man, by Morley Robert. G. J. Putnam's Sons, 1914.

Chemistry for Nurses, by Reuben Otenberg, A.M., M.D. The Macmillan Company, 1914.

Intensive Treatment of Syphilis and Locomotor Ataxia by Aachen Methods, by Reginald Hayes. Bailliere, Tindall & Cox, 1914.

Manual of Obstetrics, by Edward P. Davis, A.M., M.D. W. B. Saunders Co., 1914.

Manual of Normal Histology and Organography, by Charles Hill, Ph.D., M.D. W. B. Saunders Co., 1914.

The Clinics of John B. Murphy, M.D August, 1914. W. B. Saunders Co.

Imperial Cancer Research Fund, Twelfth Annual Report, 1913-1914.

The Etiology of Phlyctenular Ophthalmia, by Samuel Theobald, M.D. Reprint.

Practical Therapeutics, by Hobart Amory Hare, M.D. Lea & Febiger, Philadelphia, 1914.

A Reference Handbook of Medical Sciences, Third Edition, Vol. 4. William Wood & Co. 1914.

CHANGES IN THE MEDICAL CORPS, U. S. NAVY.

Lt.-Comdr. W. W. Bricker, assistant to naval attache, London, to naval attache, Paris.

Jr. Lt. A. H. Miles, the *Castine*, to *Ranger*.

P. A. Surg. T. W. Reed, Receiving Ship, Norfolk, to hospital, Norfolk.

A. Surg. E. P. Woodland, hospital at Annapolis, to hospital at Philadelphia.

Prof. of Math. W. S. Harshman, Naval Academy, to six months' leave.